

A FOLLOW-UP STUDY OF SELECTED CLINIC CLIENTS
FROM THE OKLAHOMA STATE UNIVERSITY READING
CENTER FROM 1966 THROUGH 1971

By

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Submitted to the Faculty of the Graduate College
of the Oklahoma State University
in partial fulfillment of the requirements
of the Degree of
DOCTOR OF EDUCATION
May, 1973

FEB 18 1974

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ACKNOWLEDGEMENTS

I wish to express my appreciation to those who assisted with the development and direction of this study. Special thanks is extended to Dr. Darrel D. Ray for the encouragement and valuable instruction throughout the years of graduate study and in the preparation of this study. Appreciation is also extended to Dr. James Appleberry, Dr. Russell Dobson, Dr. William Elsom, and Dr. Robert Stanners for their guidance.

I am sincerely grateful to the parents, clients, and school personnel for their cooperation in the preparation of this study.

I am indebted to my husband Larkin for the many years of encouragement, interest, and assistance and to Adena and Margy for their support and cooperation.

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CHAPTER I

PRESENTATION OF THE PROBLEM

Introduction

The constant struggle with reading experienced by many children has caused an increase in concern by educators and parents. Most of these children receive remedial help in school programs based on analysis of results of a general survey or achievement test. The clinical approach is particularly suited for the identification of abilities and disabilities, and for individualized diagnosis (Bond and Tinker, 1967).

Thousands of disabled readers are identified in schools and clinics yearly. The failure rate among students in reading programs remains constant at approximately 15 to 20 percent (Bond and Tinker, 1967).

An increase in the number of reading clinics being established affirms the concern and awareness of the reading disability problem. Clinic staffs can offer the most effective type of service when pertinent information is compiled into a report so that remediation can be recommended.

The Oklahoma State University Center

The Reading Center of Oklahoma State University was established in 1959 to provide service to the public and to function as a laboratory of the graduate program in the area of reading. The Center offers

diagnostic services to children and adults. Clients are often students with reading difficulties which have persisted in spite of general diagnosis and remedial reading instruction in the school. Reading performance is evaluated at the Center in terms of educational, psychological and physical factors. At the completion of the diagnosis, a conference is held with the client's parents or with the adult client. A case study report containing a summary of test results, test interpretation, and recommendations is submitted to the parent, school and/or other persons involved in the remediation of the disability. Diagnostic case study reports are conducted each year by graduate students under the supervision of the Center Director. The number of clients has been increasing steadily since the Center's establishment. Approximately eighty diagnostic case study reports were completed during the 1971-72 academic year.

Theoretical Orientation

Theoretical orientation should determine the direction of research and should serve as a frame of reference for the investigator's evaluation of data. Evaluative research is applied research. The purpose of evaluative research is to measure the effect of some operating program. The term "evaluation" is used to represent both an objective and a process. The objective is defining value applied to an object, person or act. The process is measuring the degree the object, person or act possesses the valued characteristic (Doby, 1967). Riecken, (1952) defines evaluation as the "measurement of desirable and undesirable consequences of an action that has been taken in order to forward some

goal". In evaluative research, the degree of attainment of some valued objective is the main focus of the research problem.

A valued objective of educators is to guide students to become competent and independent readers. The student is assumed to have the physical, intellectual and emotional attributes to enable him to interpret the printed text and think critically about what he has read.

It is essential that the clinician have an understanding of the reading process in order to diagnose reading problems effectively. Diagnosis goes much further than merely recognizing a reading disability. The clinician is interested in recommending certain procedures to overcome disabilities and in gaining information concerning the attainment of the valued objective.

According to Kress (1950), the areas of evaluation of clinic clients should include not only the measurement of the reading performance, but also an evaluation of the client's achievement in other academic areas. He suggests that the case study report should include adjustment to school, the school situation, and the client's interactions in peer relationships.

The complexity of the reading act, the nature of reading difficulties, and the many characteristics of child growth and development that have a bearing on reading success make it clear that no two cases of disability are alike. The diagnosis of his case involves a study of the child to find out his instructional needs and everything else that may influence a remedial program for him. (Bond and Tinker, 1967)

The case study method enables the researcher to collect and analyze the progress of one individual. Hillway (1965) states:

The scientific case study, or case history amounts in essence to a careful and thorough examination of the life and behavior of one individual or "case". . . Quantitative data alone do not always appear to be enough. When human beings constitute the subject matter of a study, actual examples of

the experiences and the development of individual histories add reality to the picture. Quantitative data tend generally to make the description abstract, case histories can make it human. . . . The case study, especially when used in conjunction with a quantitative survey often draws attention to information that can not be obtained successfully in any other way and thus can be justified scientifically. (Hillway, 1965)

As Homze (1962) states, "the child who is not performing in reading develops a 'non-reader' concept of himself, often failing to experience success." Unless this pattern of failure is broken, he continuously sees himself as being unable to perform academically and behaves accordingly. It seems imperative that any investigation that concerns disabled readers should also consider the self-concept of such readers.

The causes for children's reading problems are complex and highly variable among individual children. Whether it be cause or effect, the element of self-concept is widely emphasized as related to reading disability. Good readers tend to have a more positive self-concept than poor readers (Hallock, 1958; Malquist, 1958; Zimmerman, 1965). These findings hold for a variety of measures of self-concept, and for all grade levels from one through twelve. Feelings of adequacy and personal worth, self-confidence and self-reliance seem to emerge as important factors in the relationship with reading achievement (Seay, 1960).

Holmes and Singer (1961) view reading as "a symbolic reasoning process, in which the various cognitive skills are mobilized into a working system". An affective variable, the self-concept, has a role in this working system. The self-concept might increase cognitive skills which would lead to improved reading performance, which would then lead to a better self-concept (Athey, 1970).

Rogers (1959) states that behavior is a result of how one perceives his own perceptual field. A poor self-concept may develop when a child

sees himself as performing poorly. When one does not feel worthwhile, his desire to succeed is threatened by his fear of failing.

The inclusion of the self-concept measure is based on the assumption that the self-concept is an influential factor in the reading disability. The underachiever in reading often behaves the way he perceives himself. He visualizes himself as having a limited ability to produce academically and behaves accordingly (Strang, 1966).

Osburn (1951) states that reading does not exist in a watertight compartment and that intellect, emotions, and the body have little meaning when studied alone. The case study approach with self-concept examination supports and extends the quantitative data analyzed in this study.

Need for the Study

This study was undertaken to gather and organize information of the changes in reading performance of Oklahoma State University Reading Center clients and to determine the extent of the use of the case study reports compiled by the staff at the Center. The effort was based on the assumption that there is a professional need for information on previous clients and the use of the case study reports. Children who have been diagnosed at the Reading Center return to their homes and schools, and are never seen or heard from again unless the parents make contact.

Definition of Terms

The terms used throughout this study will have the following frames of reference:

Reading Center. This refers to the reading center at Oklahoma State University. It is organized to assist in the diagnosis of reading disabilities and to suggest recommendations for further remediation.

Case Study Report. The case study report is a written report of the synthesis and interpretation of the test results concerning the subject's reading disability. This report is compiled by the university reading clinician. The case study report includes:

General Recommendations. The general recommendations found in the case study report are those which suggest steps for the client to eliminate his overall reading disability. For example, "It is suggested that the client have individual tutoring three times per week".

Specific Recommendations. The specific recommendations found in the case study report are those which suggest specific exercises to help the client eliminate a specific deficiency in an area of reading. For example, "Make a word box for new words learned. These may be filed alphabetically by _____. Each word should be used in context."

Test Interpretation. Test interpretation is the Oklahoma State University clinician's assessment of the meaning and significance of test results.

Remediation. Remediation is the prescriptive program outlined in the case study report for the client which is based on his individual needs to overcome a reading disability.

Disabled Reader. A reader is "disabled" when there is a discrepancy between his expectancy and his instructional level. Disabled readers in this study will be limited to those reading below their reading expectancy at the time of diagnosis.

Expectancy. Expectancy is the reading level that a child should have attained. This study will refer to the Bond (1967) formula for computing Expectancy, $E = \frac{I.Q. \times \text{Years in School} + 1}{100}$. This formula is used at the Oklahoma State Reading Center.

Diagnosis. Diagnosis is the identification of weaknesses or strengths of the client's ability.

Average I.Q. For the purpose of this study an average I.Q. will refer to those scores one standard deviation on either side of the mean on the Stanford-Binet Intelligence Scale or the Wechsler Intelligence Scale for Children or the Wechsler Adult Intelligence Scale.

Instructional Level. This is the optimal level for reading instruction. Material at this level is neither too easy nor too difficult for the learner. The instructional level is determined by the score on an informal measure such as the Kaleidoscope Informal Reading Inventory.

Self-Concept. Self-concept refers to how a person views himself. Self-concept for this study will be defined as scores on the sub-scales on the California Test of Personality. The sub-scales include:
(1) Self-Reliance, (2) Sense of Personal Worth, (3) Sense of Personal Freedom, (4) Feeling of Belonging, (5) Withdrawing Tendencies, and (6) Nervous Symptoms.

Statement of the Problem

The purpose of this study is to report changes in reading ability and attitudes toward reading along with a measurement of the present self-concept of selected reading clients who were diagnosed at the Oklahoma State Reading Center, Oklahoma State University. It is also

intended to evaluate the extent of the use of the case study report by parents and school personnel so that the Reading Center staff might evaluate the effectiveness of the case study report.

More specifically, this study analyzed data from reading tests, a self-concept measure, and personal interviews in order to answer the following client related questions:

1. What is the present reading level of each client?
2. What is the school progress made by each client?
3. What is the attitude of the client toward reading?
4. What is the attitude of the client toward school?
5. What is the most favored subjects of the client?
6. What is the least favored subjects of the client?
7. What is the client's present self-concept?
8. Does the client read independently?

Data was analyzed to answer the following teacher related questions:

1. Is there agreement between the client's reading level and that perceived by the teacher?
2. Was the case study report helpful to the teacher?
3. What specific additions or changes are suggested to improve the case study report?

Data was analyzed to answer the following parent related questions:

1. Is there agreement between the client's reading level and that perceived by the parent?
2. Was the case study report helpful to the parent?

Limitations

The following limitations are present in the study:

1. The study involves only twenty-five Reading Center clients who were referred to the Oklahoma State

University Reading Center from January, 1966, to April, 1971.

2. Reading achievement test data are limited by the validity and reliability of the tests and the sophistication of examiners.
3. Reading achievement test data of clients who comprised the study population was determined by one standardized reading test.
4. The self-concept measure was determined by the six subtests of the measure.
5. Not all possible variables are being studied or controlled.

Assumptions

The following assumptions are a necessary part of this study.

1. Testing instruments used for the study are reliable and valid.
2. The self-concept is a valid and measurable aspect of personality.
3. The testing done during the initial diagnosis is valid and reliable.
4. Reading abilities, self-concept, and academic abilities are measurable.

Significance of the Study

The major emphasis of the study was to obtain information concerning changes in reading abilities and attitudes of clinic clients from original sources (i.e. school personnel, clients, and parents). The results should provide information to the clinic for improved communications concerning the case study reports with parents of the client and school personnel.

Organization of the Study

Chapter I has presented the problem to be investigated. It has given a theoretical background and significance of the study, stated the problem to be studied, and noted the limitations of the study.

Chapter II reviews the literature concerned with follow-up studies related to reading and the self-concept.

Chapter III describes the study, the study population, the instrumentation and procedures followed in the study.

Chapter IV contains the findings of the study. This chapter included the attempts to answer the questions concerning the reading performance of the clients, attitudes of the clients toward reading and school and the use of the case study reports.

Chapter V offers a discussion of the results. Conclusions and recommendations are made pertaining to the need for further studies in this area.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Although there is an extensive literature concerning diagnosis and remediation of reading disabilities, only a limited portion is specific to follow-up evaluation of previous clinic clients. The survey of the literature is confined to the follow-up studies concerning the status of disabled readers who had been diagnosed in a reading clinic, together with a review of selected studies concerning the self-concept and its relationship to reading achievement.

Selected Follow-Up Studies

Follow-up studies found in the literature show mixed findings regarding the effectiveness of reading clinics.

In a study showing significant clinic effectiveness, Hardin (1964) investigated the change in reading abilities, attitudes and behavior of twenty-nine reading clinic clients from the Child Study Clinic, University of Missouri. Test scores and school officials' subjective assessments of student progress were compared with initial test scores and information. Information was also obtained concerning the use of the case studies of the clients.

Hardin found that twenty-seven of the twenty-nine clients involved in the investigation made gains in reading achievement, however, only

eleven were reading up to their expectancy. Twenty-four of the twenty-nine clients were observed by school personnel to have made improvement in reading achievement. Positive changes in attitude toward reading and school were observed for twenty-five of the twenty-nine clients. Hardin reached the following conclusions:

1. School personnel observations of reading improvement of the clients corresponded with the results of the reading tests.
2. A majority of the clients made gains in reading achievement.
3. Of the fifty-eight school persons interviewed, twenty-five failed to use the case study report. Those teachers who had access to the case study reports found them helpful.
4. Case study reports were helpful to parents in helping to eliminate the reading disability.
5. Behavioral improvements were found in those who had made reading achievement gains.

Robinson and Smith (1962) investigated the academic and/or occupational status of forty-four University of Chicago Reading Clinic clients ten years after clinic diagnosis. Information was obtained through interviews and questionnaires. This study supported the idea that pertinent information can be obtained by personal and telephone interviews and by questionnaire. The hypothesis was explored that retarded readers never become competent readers.

The sample consisted of students from the University of Chicago Laboratory Schools and from the public schools in Chicago. The total number investigated was forty-four. Eleven had come from other schools for diagnosis only and sixteen had followed the diagnosis with remedial instruction. The subjects' chronological ages ranged from 7 to 18 years, with a median IQ of 120. The levels of retardation range from one to

several grades. Reading difficulties included vocabulary deficiencies, word recognition, comprehension, and rate.

Robinson and Smith found that more than half of the population had completed college; all but two of the group who had a reading disability were engaged in various occupations and only eleven of the group were reading below average performance. Parents' reactions to the clinic experience were favorable when they were in close contact with the clinic and were able to judge the progress made by their children. Robinson and Smith concluded that follow-up plans should be made when subjects are dismissed from remediation instruction.

In a critique of Robinson's and Smith's study, Balow and Blomquist (1965) suggested that the sample used by Robinson and Smith presents an optimistic picture of the long-range potential for disabled readers, since the subjects had high mental ability and had private-school status.

Mary Adams' (1960) doctoral study reported contrasting results. Of the 555 pupils from the St. Louis Public Schools' Reading Clinics who had been diagnosed as cases of severe reading disability, the following results were found. Ninety did not finish grade school, fifty-nine were still in grade school, one hundred and four dropped out of high school, seventy-seven did not attend high school, and one hundred and twenty-three graduated from high school.

No single key was found to success in academic achievement. Adams studied the following factors: sex, hours of remediation, physical handicaps, age and gains in oral and silent reading. She drew the following implications from her study:

1. Children dismissed who can engage in independent word attack make double the gains over those who leave the clinic before attaining this skill.

2. Disabled readers who attended the clinic do not tend to attend or graduate from college.
3. One out of five graduated from high school and seven out of ten graduated late from grade school.

Preston and Yarrington (1967) compared the status of fifty retarded readers eight years after reading clinic diagnosis. Their sample consisted of fifty individuals from a total pool of one hundred and twenty-four cases who were of school age and had been examined at the Reading Clinic of the University of Pennsylvania. The median chronological age was 12-0 and the median IQ was 97.6. Forty were males and six were females. In addition to having been diagnosed at the Reading Clinic, each subject had received several sessions of remediation.

Telephone interviews were used to obtain data concerning the present educational status, amount of education, and current occupational status of the clients. Comparisons were made with the national population figures. Data concerned with retention and attrition for those no longer in school or college were based on the median year of high school graduation of the classes to which those subjects belonged.

They found that all subjects that were of typical high school age were attending high school. The high retention rate was not significantly different from the national retention rate. One-half of those with typical post-high school age were also attending high school. This was significantly higher than that age group in the national population. The writers concluded that the most marked distinguishing characteristic of the subjects was the slower pace of schooling. The college attrition rate was higher for the sample than the national population with only three completing college. None of those in college had plans to enter a professional or graduate school.

More than two-thirds of the subjects had repeated from one to three grades, while only 16 percent of the national population had failed a grade. The proportion of dropouts from elementary and high school did not differ significantly from the national dropout rate.

Of the twenty-one subjects in civilian occupations, over half were in white-collar occupations. This was not significantly different from the national population.

Preston and Yarrington concluded that, after a span of eight years, retarded readers fulfill educational and vocational roles comparable to those of their age peers in the general population. However, evidence for a slower pace of education was indicated.

Ellis A. Tufvander and Miles V. Zintz (1957) investigated the growth of reading achievement of students who had been referred to the Iowa State Teachers College for reading difficulties.

The sample consisted of eighty-two students with a range of chronological ages from 8 to 17 years and with grade placement of grade one of grade eleven with an average IQ of 102.5. The level of retardation was from non-readers to two or more years retardation in relation to grade placement.

The sample was divided into two groups. The control group consisted of students who had been referred to the clinic for diagnosis and recommendations, but received no remedial instruction at the clinic. The second group consisted of children who had been given reading diagnosis and received an average of eight weeks of remedial instruction at the clinic.

Retesting was done to establish a reading level for the first group. For the second group the reading level was obtained at the end of the

remedial instruction at the clinic. When they returned to participate in this follow-up study they were again tested for their reading level.

Through the use of Chi-square, it was concluded that performance of the group with the clinic treatment was not significantly different from that of the control group. Most growth was evident when remedial instruction continued outside the clinic with help from the parents.

Parents were interviewed to determine the nature of help attained after diagnosis or instruction in the clinic. For those children in both groups making less-than-normal progress, only 21 percent in the treatment group received further special help after leaving the clinic, while 43 percent of the control group had received special assistance.

Those students who made normal or better-than-normal progress in reading amounted to two-thirds of the total sample. Normal growth was a full year's growth in reading for each year the child was away from the clinic. Abnormal growth was any deviation of one-half year below. Most growth was made by those students who had remedial instruction outside the clinic and parental help at home. Private tutoring was more prevalent in the normal or above normal subjects. Special help in school did not vary in any significant proportion with the progress in reading achievement. Seventy-seven percent of the parents felt that early guidance would have helped prevent their child's reading difficulty.

The writers concluded that the Educational Clinic at the Iowa State Teachers College was providing a valuable service to clients with reading difficulties and their parents. This conclusion was based on such observations as: (1) 49 percent of the eighty-two cases in the study were making normal growth and 26 percent were making better than normal

growth in reading; (2) 46 percent of the subjects showed improvement in social adjustment; (3) increase in school progress on reports from school was reported by 69 percent of the cases; (4) 95 percent of the parents indicated a desire for detailed recommendations, and (5) more reading progress takes place when parents receive and follow clinical recommendations.

In an adult follow-up study Balow and Blomquist (1965) studied thirty-two male adults who had been retarded readers 10 to 15 years previously. IQ's were in the average range as measured by the Stanford-Binet Scale or the Wechsler Intelligence Scale for Children and reading retardation was 2 to 5 years below age-grade expectation at the time of initial diagnosis. Telephone interviews were used to obtain information concerning academic accomplishments, occupational and marital status, extent of remedial reading, and general attitudes toward reading. Nine of the subjects were directly tested at the University of Minnesota Psycho-Educational Clinic for personality and reading levels using the Gates Reading Survey Test and the Minnesota Multi-phasic Personality Inventory. Nearly all the subjects had had some instruction in remedial reading throughout their elementary and secondary school years. This special instruction consisted of private tutoring, summer programs, remedial classes in school, and adult speed reading courses. At the time of the follow-up, the male subjects were 20 to 26 years of age.

They found that twenty-seven of the subjects graduated from high school, nineteen had post-high school education, and less than half were in occupations of a semi-skilled nature. None were unemployed. Nine subjects completed the tests of reading and emotional status.

Eight of the nine tested with the Minnesota Multi-phasic Personality Inventory showed some personality deviancy. The current reading grade average equivalent was 9.6 for speed, 10.9 for vocabulary, and 10.2 for comprehension.

The writers concluded that,

Males who are severely disabled in reading and who come from a middle-class metropolitan area will attain average adult reading proficiency (approximately tenth-grade level), graduate from high school, possess mild emotional disorders of a neurotic type and find jobs over a wide range of occupational levels. (Balow and Blomquist, p. 48)

A study of clinic clients at Syracuse University was undertaken by Taylor (1965) to determine the reading status of former clients of the Center and to assess the value of the reading diagnosis evaluation to clients and parents. Clients who had received diagnosis at the Center from February 9, 1959, to August 9, 1960, were included in the sample. Clients were in grades one through nine and were between six and seventeen years of age.

Questionnaires were used to determine each client's present reading ability, attitudes toward reading, and remedial instruction received to implement the recommendations in the original diagnosis. Data were tabulated by groupings based on age, sex, and intelligence.

Taylor concluded that if children had early diagnostic evaluation, prognosis for reading improvement was greater. The diagnostic report should specifically inform parents of their roles in the elimination of the reading disability. There is also a necessity for clear communication between a clinic and the client's teachers. He also concluded that immediate remedial instruction was needed for a greater increase in reading gains.

In an attempt to evaluate the effectiveness of the Reading Program at the McGuffey Reading Clinic at the University of Virginia, Turner (1967) selected a population of sixty retarded readers from the Clinic files.

The population consisted of two groups. Holding the variables sex and grade placement constant, one group consisted of those who had received diagnostic testing at the Clinic with no remedial reading program, and the second group consisted of clients who had diagnostic testing and a five-week remedial reading program. Subjects had IQ's between 90 and 120 and were in the third, fourth, or fifth grades. They were one year or more retarded in reading at the initial diagnosis.

An instructional level score derived from standardized tests administered to all subjects was used for a present reading status measure. Comparative analysis utilizing the t-test was used to analyze the data.

The investigator rejected the hypothesis that children who attended the Remedial Reading Programs made significant improvements in reading and were presently reading at significantly higher grade levels than those children who were tested at the Clinic but did not attend the remedial reading programs. Children who received only diagnostic testing made as much reading improvement as those children who received both diagnosis and remediation.

Turner suggests that further study should be undertaken concerning the use made of the diagnostic reports submitted to schools, and concerning relative value of different diagnostic services.

In a twelve-year follow-up study, Silver and Hagen (1963) used a sample of twenty-five children with severe reading disability who had been diagnosed at the Bellevue Hospital Hygiene Clinic, New York

University Medical Center, during the period of 1949 to 1951. They reported the perceptual, psychological and cognitive status of the clients as still indicating signs of psychological neurological difficulty with visual and tactile perception. Adequate adult readers were less severely retarded in reading as children. The writers concluded that specific reading disability is a long term problem and that children with neurological signs, as well as a severe reading disability, are inclined to show less improvement. The writers suggest that clinics make an initial evaluation of perceptual and organic signs and utilize recommendations for overcoming such defects.

Summary

It is difficult to come to a general conclusion concerning the eventual achievement of disabled readers from the above studies. This is due in part to the complex individual variables involved in each group. The studies have shown that previous clinic clients do make gains in reading, but hardly ever reach their expectancies, do have a better attitude toward reading if they receive appropriate remediation and later fulfill various adequate occupational and academic roles.

The most important observation from the literature is that prognosis for eventual reading gains seems to be determined by parental involvement, early diagnosis, mental ability and the amount, duration and individual growth during remediation.

Studies Relating to Self-Concept and Achievement

The effect of self-concept on academic achievement is supported by a great deal of research. Even though a child is capable intellectually,

his encounter with school experiences which involve failure over a period of years sets up feelings of inferiority in the individual. Holze (1962) states that the child who has little success in reading develops a "non-reader" concept of himself, making progress and improvement difficult.

Poor self-concept in the disabled reader is a factor which will tend to inhibit reading growth until a change takes place in self-perception to make the reading act a self consistent activity.

A study of underachievers, by Charles F. Combs (1964), provides evidence of the underachiever's perception of himself. The sample consisted of twenty-five underachieving, and twenty-five achieving junior boys of above average intelligence. An apperceptive instrument was used for evaluation of the subjects' perceptions. The t and F tests revealed very significant differences between the groups. Underachievers showed differences in the following.

1. They saw themselves as less adequate.
2. They saw themselves as less acceptable to others.
3. They saw their peers as less acceptable.
4. They saw adults as less acceptable.
5. They showed no inefficient and less effective approach to problems.
6. They showed less freedom and adequacy of emotional expressions.

Combs concluded that the underachiever fails to achieve because he lacks a feeling of personal adequacy. Because he feel unacceptable, he cannot invest in others or run the risk or further failure.

In a study by Henderson, Long, and Ziller (1965) personality correlates of reading disability (differentiation, esteem, and

individualism) were used as components of the self-concept. It was hypothesized that years of reading failure would affect the disabled reader's perception of himself. Thirty-two boys and sixteen girls, ages seven to fourteen, who were diagnosed at the University of Delaware's Reading Study Center were used as non-achievers.

The principal conclusion that the investigators drew from the study was that retarded readers are characterized by a relatively high degree of dependency. They suggest that paced instruction with the support of a significant person who can insure success might serve as a technique for gradual development of self-reliance.

Moffett (1961) investigated the relationship between perception of self and achievement in reading. The main hypothesis was that students that are of average intellect and have a favorable perception of themselves reach higher levels of reading achievement than students with average intellect whose self-perception was unfavorable. The subjects were eighty-five seventh grade students who volunteered to participate. Matched pairs on sex were determined, and instruments applied included the Wechsler Intelligence Scale for Children, Bills' Index of Adjustment and Values, and the California Test of Personality. Moffett found a significant difference between reading means of the upper and lower quartile as indicated by the Bills' Index. There was also a significant difference between reading means of the upper and lower quartiles as indicated by the California Test of Personality.

In an attempt to determine the relationships between immature self-concepts and educational factors Bodwin (1957) studied reading and arithmetic areas with 300 third and sixth grade subjects. The Draw-A-Person Test was to measure self-concept and the Stanford Achievement

Test was used to measure achievement for the third grade subjects. The grade achievement was measured by the Iowa Test of Basic Skills. Bodwin found a positive and significant relationship between immature self-concept and reading disability in the third and sixth grade. He also found a positive and significant relationship between immature self-concept and arithmetic disability in both grades. Both findings were significant at the .01 level of confidence.

Bouise (1955) studied the emotional and personality problems of retarded readers. From a total pool of two hundred and four seventh grade students, twenty-eight superior readers and 30 retarded readers were used for study. All subjects were seventh grade students, twelve years old or older and of average intelligence. Adjustment was measured by the Detroit Adjustment Inventory. She found that retarded readers are less secure at home and at school than superior readers and that superior readers scored higher on total adjustment scores than did retarded readers. Bouise determined that there was a relationship between emotional maladjustment and reading disability.

In a longitudinal study of the effects of changing children's attitudes towards reading, Healy (1965) worked with two groups of matched pairs of heterogeneous fifth graders and junior high students. The California Mental Maturity Test was used for matching IQ and achievement was matched through the use of the California Achievement Test. Using small groups, Healy found that change in attitude produced significant results in reading achievement. The Wilcoxon's Matched-Pairs Signed-Ranks Tests were used to determine differences in reading achievement gains and independent reading. Her findings suggest that favorable attitudes produce significant reading achievement. Reading materials

devised to promote interest were used to change attitude toward reading.

Summary

Many research findings show a relationship between reading achievement and self-concept. If we examine the pressures placed on a child who fails, a casual relationship between reading failure and poor self-concept is very likely. In today's society, reading success is so related to esteem and social acceptance, that a reading disability is a disability in every area of learning. Unless this circle of failure is broken with success, feelings of inferiority will persist in the individual. The evidence given in the literature reviewed gives justification to the consideration of self-concept in this study.

CHAPTER III

METHODS AND PROCEDURES

Introduction

This chapter describes the procedures used in conducting this investigation. Aspects presented are: (a) the study population, (b) the testing instruments and guides for interviewing, and (c) the treatment of the data acquired from the administration of tests and interviews.

Selection of the Population for the Study

Subjects who participated in this investigation were clients who were evaluated at the Oklahoma State University Reading Clinic during the period of January 6, 1966 to April 2, 1971. In order to avoid unusual responses associated with mental retardation, physical handicap or the specially gifted, only those clients were contacted who scored within one standard deviation on either side of the mean on relevant intelligence tests (Stanford-Binet Intelligence Scale, Wechsler Intelligence Scale for Children, Wechsler Adult Intelligence Scale). There were sixty-five such clients, and letters were sent to each inquiring about willingness to participate in the study. A sample of the letter appears in Appendix A. No reply was received from thirty-six of the sixty-five parents or guardians. Two replied that they were unwilling to participate. Twenty-seven expressed willingness to cooperate, although two later had to be excluded because of distance from

Stillwater. Thus, the study population consisted of twenty-five clients. Table 3-1 describes the geographic distribution of the study population. Appendix B gives a description of the remediation of the clients.

Each of the twenty-five participants was contacted by the investigator for arrangement of a personal interview and testing period. Interviews were conducted with all parents of the clients. Where available, teachers of the clients were interviewed. Following the completion of the testing period and the interviews, the investigator interpreted the data to formulate the recommendations in the form of a follow-up case study report for use of the parents and school personnel or tutors.

Selection of Instruments

Reading Tests

Two widely used testing techniques were applied to each client to determine reading performance. The Kaleidoscope Readers, Informal Reading Inventory Test, Oklahoma State University, was used to identify functional reading levels. The Wide Range Achievement Test provided information about word recognition and pronunciation. Each will be discussed in turn.

One of the primary purposes of this study was to determine the change in reading level of the clients. Clients were given the appropriate levels of an informal reading inventory for comparison with reading levels at the time of the initial clinical assessment. The Kaleidoscope Readers Informal Reading Test included oral and silent paragraphs. The Informal Reading Inventory is a technique of evaluating

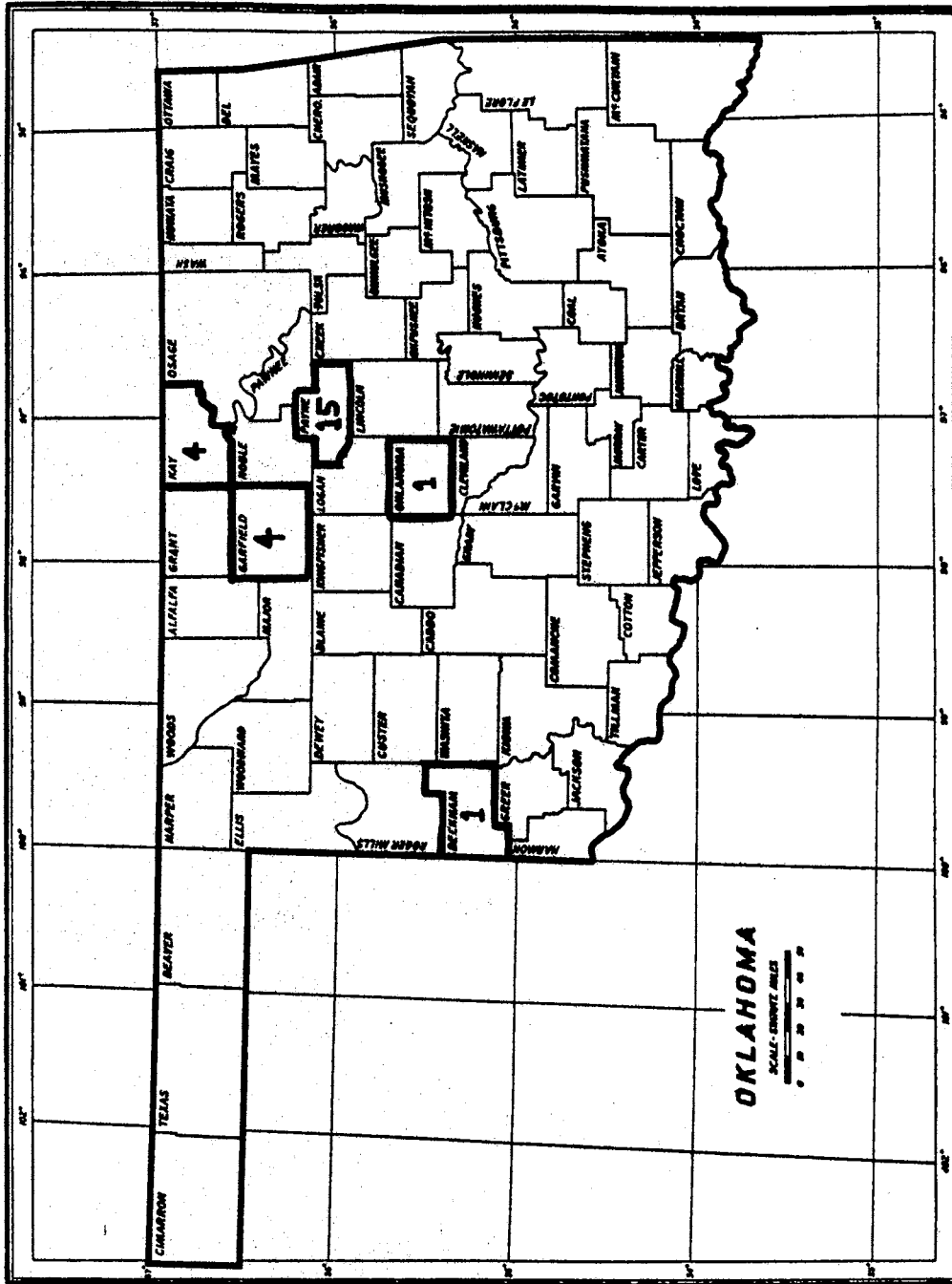


Figure 1. Geographic Distribution of Study Population

a student's performance as he deals with materials varying in difficulty. An Informal Inventory appraises the individual's level of competence on reading material without reference to what other students can do (Johnson, 1960). The Informal Reading Inventory is read aloud by the examinee to the examiner. Comprehension checks follow each graded paragraph reading. Oral errors can be noted by the examiner for further diagnosis. Paragraphs to read silently for assessment of silent reading rate and silent comprehension are included. On the basis of these readings, the examiner can determine the student's functional reading levels.

A comparison was also made of the client's ability to recognize and pronounce words in isolation by use of the Wide Range Achievement Test. This test is given to all Oklahoma State University clients as an indicator of what level to begin measuring the functional levels on the Informal Reading Inventory. Thus, it was possible to compare the follow-up evaluation score with the initial clinical assessment for this particular instrument.

Personal Adjustment Test

In dealing with individual reading disability and evaluation of change, it is important to look at the individual's performances in all areas. Research supports the idea that an adequate self-concept is an important component of reading success can be viewed in the same way as basic skills (Berretta, 1970).

Since another primary concern of this investigator was to determine the personal adjustment of clients included in the study, the six subtests of the California Test of Personality were included.

The California Test of Personality was devised by Thorpe, Clark, and Tiegs (1953) as an analytical personality questionnaire providing scores on self-adjustment and social adjustment. The test is published by the California Test Bureau.

This test was chosen because it could be administered to clients at all levels. So that the administration would be identical for all subjects, the investigator read each item to the subjects. Moreover, this type of administration meant that the reading disability of the client did not interfere with the testing situation.

The following six subsections of the Personal Adjustment Section were given: (1) Self-Reliance, (2) Sense of Personal Worth, (3) Sense of Personal Freedom, (4) Feeling of Belonging, (5) Withdrawing Tendencies, and (6) Nervous Symptoms.

The Interview

The questionnaire is an instrument that is widely used by educators to obtain facts about current conditions and practices, and to make inquiries concerning attitudes and opinions (Deobold, 1962). For the purpose of this study, the questionnaire technique was chosen as the most practical device with which to obtain data concerning school progress, attitudes of the clients towards school and reading, and the use of the case study reports by parents and school personnel.

An interview guide which can be found in Appendix C was developed by the investigator to obtain information relative to the specific questions outlined in the purposes for the study.

Two sections were developed in the interview guide to use with (1) the parent or guardian of the client and (2) school personnel who

worked with the client. The unique element of the parent-guardian interview was the inclusion of a question concerning the retention of the client. The unique element of the school personnel section was inclusion of two questions concerning the involvement of the client in class activities.

Common elements found in the interview guides were questions concerning the school progress of the client, attitudes toward reading, attitudes toward school, independent reading practices of the client, reading level of the client, and use of the case study reports.

Provision for unstructured comments were included so that increased understanding of the client's progress and attitudes could be made subjectively.

All parent-guardian interviews were done face-to-face after the completion of the testing period. Effort was made to have face-to-face contact with school personnel, but scheduling problems led to the use of the telephone in three of twenty-five interviews.

All data obtained from the interviews and tests were compiled into a case study report and placed in the client's original file in the Oklahoma State University Reading Center. A copy was also sent to the parents and school personnel. An example of the follow-up case study report appears in Appendix D along with an example of an initial case study report.

Procedures in Analyzing Data

Data from the questionnaires were classified, and placed into frequency distributions in an attempt to answer questions concerning the

client's school progress, attitude toward school, independent reading, and the use of the case study reports.

All tests were scored and interpreted by the investigator. Changes in reaching achievement were made by comparing the initial evaluation instructional reading level score with the follow-up evaluation instructional reading level score. Test scores were also compared with respect to the reading expectancy grade level scores of each client. Word recognition scores were compared for changes in ability to recognize isolated words. Personal Adjustment scores were tabulated and analyzed.

Summary

Given the purposes set forth in Chapter I, this research effort proceeded from the (1) the identification of the population, (2) the generation of original data using appropriate tests and survey instruments, (3) analysis of the data, to (4) the development of conclusions. Each step has been documented so that the methodology could be replicated in similar situations. The following chapter presents and analyzes the data.

CHAPTER IV

FINDINGS OF THE STUDY

Introduction

The purpose of this chapter is to present the detailed findings concerning the analysis of the test results and interview data obtained from the selected twenty-five reading clinic clients who were diagnosed at the Oklahoma State University Reading Center from January, 1966, to April, 1971. These data were analyzed specifically to answer questions posed in Chapter I. These questions were:

1. What is the present reading level of each client?
2. What is the school progress made by each client?
3. What is the attitude of the client toward reading?
4. What is the attitude of the client toward school?
5. What are the most favored subjects of the client?
6. What are the least favored subjects of the client?
7. What is the client's present self-concept?
8. Is there agreement between the client's reading level and that perceived by the teacher?
9. Is there agreement between the client's reading level and that perceived by the parent?
10. Was the case study report helpful to the parent?
11. Was the case study report helpful to the teacher?
12. What specific additions or changes are suggested to improve the case study report?

Reading Levels

Data in Table I, II, III, and IV are related to the question:

"What is the present reading level of each client?"

One of the primary purposes of the Reading Clinic is to determine the instructional level of each client so that frustration can be avoided by providing remediation within the client's range of performance. It is hoped by the clinician that this reading performance level will eventually move up to the client's expectancy. Expectancy refers to intellectual capacity in relationship to grade scores as defined in Chapter I.

The data presented in Table I is concerned with the reading achievement differences from the initial evaluation to the follow-up evaluation. Reading gains were made by twenty-four of the twenty-five clients. Gains ranged from 0.20 grade equivalent to 4.70 grade equivalent. One client made a reading gain of 4.70 years, one made a reading gain of 4.00. Four clients gained 3.00 years, two made gains of 2.50 years, one of 2.00 years, three of 1.50 years, six of 1.00 year, and six made less than one year gain. One client stayed at the same instructional level as at the initial diagnosis. This client had been diagnosed at the Reading Center three years prior to the follow-up evaluation.

Table II depicts the changes in reading performance in relation to initial reading performance, together with expectancy and follow-up evaluation reading performance in relation to expectancy.

At the time of the follow-up evaluation, one client had reached his reading expectancy. One client stayed the same in relation to his reading expectancy, seventeen evidenced an increase in the discrepancy

TABLE I

READING ACHIEVEMENT DIFFERENCES FROM
INITIAL TO FOLLOW-UP EVALUATION,
IN GRADE EQUIVALENTS

Client Number	Initial Case Report	Follow-Up Informal In- ventory In- structional Level	Difference
1	1.35	1.75	+0.40
2	3.50	6.50	+3.00
3	5.00	8.00	+3.00
4	3.20	6.00	+2.80
5	3.20	3.20	0.00
6	1.40	2.50	+1.10
7	3.00	3.50	+0.50
8	4.50	6.00	+1.50
9	6.00	8.50	+2.50
10	1.35	2.50	+1.15
11	2.50	3.50	+1.00
12	1.00	3.00	+2.00
13	1.00	1.20	+0.20
14	1.50	5.50	+4.00
15	3.00	4.50	+1.50
16	8.00	9.50	+1.50
17	1.00	3.50	+2.50
18	3.50	4.50	+1.00
19	7.00	7.50	+0.50
20	2.00	5.00	+3.00
21	2.00	3.20	+1.20
22	5.00	6.00	+1.00
23	3.00	3.20	+0.20
24	2.50	3.20	+0.70
25	1.30	6.00	+4.70

TABLE II
 COMPARISON OF ACTUAL TO EXPECTED READING
 LEVELS, IN GRADE EQUIVALENTS

Client Number	Initial Instruc- tional Level		Follow-Up Instruc- tional Level		Actual-Expected Discrepancy ^a	
	Actual	Expected	Actual	Expected	Initial	Follow-Up
1	1.35	1.50	1.75	3.30	0.25	1.65
2	3.50	5.80	6.50	9.50	2.30	3.00
3	5.00	6.40	8.00	12.00	1.40	4.00
4	3.20	3.90	6.00	6.70	0.70	0.70
5	3.20	6.60	3.20	9.70	3.40	6.50
6	1.40	2.50	2.50	4.20	1.10	1.70
7	3.00	4.60	3.50	5.80	1.60	2.30
8	4.50	6.70	6.00	12.50	2.20	6.50
9	6.00	7.80	8.50	9.80	1.80	1.30
10	1.35	3.90	2.50	5.80	2.55	3.30
11	2.50	4.80	3.50	6.70	2.30	3.20
12	1.00	1.60	3.00	3.30	0.60	0.30
13	1.00	1.80	1.20	3.10	0.80	1.90
14	1.50	2.10	5.50	6.70	0.60	1.20
15	3.00	3.50	4.50	6.10	0.50	1.60
16	8.00	9.00	9.50	10.10	1.00	0.60
17	1.00	4.60	3.50	6.00	3.60	2.50
18	3.50	4.50	4.50	7.10	1.00	2.60
19	7.00	8.70	7.50	10.30	1.70	2.80
20	2.00	8.20	5.00	15.40	6.20	10.40
21	2.00	6.20	3.20	9.80	4.20	6.60
22	5.00	8.90	6.00	9.80	3.90	3.80
23	3.00	4.20	3.20	6.00	1.20	2.80
24	2.50	3.70	3.20	5.00	1.20	1.80
25	1.30	1.90	6.00	6.00	0.60	0.00

^aFor clients continuing to read at a constant absolute level, the actual - expected discrepancy increases over time simply because grade-level expectancy increases.

between their reading performance level and their expectancies and six showed a decrease in the discrepancy between their reading performance level and their expectancies.

For those whose discrepancies narrowed, only one showed a relative gain of as much as one full year. The pattern was more variable for those whose discrepancies increased, with the range of increase falling between 0.1 and 4.3 years. Three clients (cases 4, 12, and 16) were consistently reading close to their expectancies and would no longer be considered reading disability cases.

Table III shows the follow-up instructional reading level and the actual grade placement at the time of the follow-up evaluation. One client was reading 0.3 grade equivalent above actual grade placement, and one was reading at actual grade placement. Twenty-three of the twenty-five were reading below their actual grade placement. The discrepancies between the instructional reading level and the actual grade placement ranged from 0.5 to 7.8. For three clients, grade placement exceeded reading instructional level by 6.5 years or more, another three were three to four years short, and for five the gap fell in a relatively narrow range between 2.2 and 2.6 years.

Word Recognition

Competency in word recognition is important to the fluent reader at any level. Independent word recognition should increase as the student matures (Bond and Tinker, 1967).

The clinician uses various measurements to recognize patterns of word attack the client uses. Comparisons of Wide Range Achievement Test

TABLE III
 FOLLOW-UP READING INSTRUCTIONAL LEVEL
 AND GRADE PLACEMENT

Client Number	Follow-Up Instructional Level	Grade Placement	Difference
1	1.75	2.80	-1.15
2	6.50	8.70	-2.20
3	8.00	10.80	-2.80
4	6.00	6.80	-.80
5	3.20	9.80	-6.60
6	2.50	4.00	-1.50
7	3.50	4.70	-1.20
8	6.00	12.90	-6.90
9	8.50	9.80	-1.30
10	2.50	4.80	-2.30
11	3.50	6.80	-3.30
12	3.00	2.70	+0.30
13	1.20	2.60	-1.40
14	5.50	6.00	-.50
15	4.50	5.80	-1.30
16	9.50	10.80	-1.30
17	3.50	4.70	-1.20
18	4.50	7.00	-2.50
19	7.50	9.70	-2.20
20	5.00	12.80	-7.80
21	3.20	9.70	-6.50
22	6.00	9.70	-3.70
23	3.20	5.80	-2.60
24	3.20	4.70	-1.50
25	6.00	6.00	-.00

scores of the initial evaluation and the follow-up evaluation give an indication of change in word recognition ability. These data are presented in Table IV.

All twenty-five clients showed gains from the initial evaluation on the Wide Range Achievement Test. Gains ranged from 0.3 to 3.8 years grade equivalent. The client who scored on the reading test at his expectancy made the highest grade equivalent gain on the word recognition test of 3.8. Three clients made gains of three years, nine made gains of close to two years, six of one year and six of less than one year.

California Test of Personality Findings

Piaget (1969) states that the development of intelligent behavior is the result of the interactions of the organism in the environment. Rotter (1954) supports Piaget when he states that the basic unit of personality is the interaction of the individual with his meaningful environment. Osburn (1951) points out that day after day, month after month, etc., children with reading disabilities are "denied" participation in groups because they cannot and do not learn to read.

Data in Table V is related to the question: "What is the present self-concept of the client?"

Over half of the clients scored below the 50th percentile on the total personal adjustment section of the California Test of Personality. Fifteen clients scored below the 50th percentile on the subtests, "Self-Reliance" and "Feeling of Belonging." Fourteen scored below the 50th percentile on the subtests "Sense of Personal Worth" and "Withdrawing Tendencies." Thirteen of the twenty-five clients scored below the 50th percentile on the subtests "Nervous Symptoms" and "Personal Freedom."

TABLE IV

WORD RECOGNITION DIFFERENCES FROM INITIAL TO
 FOLLOW-UP EVALUATION, IN GRADE EQUIVALENTS
 FROM WIDE RANGE ACHIEVEMENT TEST

Client Number	Initial Case Report	Follow-Up	Difference
1	1.4	2.5	+1.1
2	4.6	6.4	+1.8
3	4.2	7.8	+3.6
4	3.3	5.0	+1.7
5	3.9	4.3	+.4
6	1.8	3.1	+1.3
7	2.7	4.9	+2.2
8	4.5	7.6	+3.1
9	7.6	9.3	+1.7
10	2.3	4.0	+1.7
11	3.5	4.9	+1.4
12	2.2	3.8	+1.6
13	1.2	2.5	+1.3
14	2.2	4.1	+1.9
15	3.5	5.0	+1.5
16	9.7	12.0	+2.3
17	2.3	3.1	+.8
18	2.7	4.5	+1.8
19	8.7	9.2	+.5
20	3.0	4.2	+1.2
21	2.8	3.8	+1.0
22	4.8	5.2	+.4
23	2.7	3.4	+.7
24	3.6	3.9	+.3
25	2.2	6.0	+3.8

TABLE V
 DISTRIBUTION OF CLIENTS BY PERCENTILE
 ON THE CALIFORNIA TEST
 OF PERSONALITY

Number of Clients	<u>Subtest on the California Test of Personality</u>
15	Self-Reliance
14	Sense of Personal Worth
13	Sense of Personal Freedom
15	Feeling of Belonging
14	Withdrawing Tendencies
13	Nervous Symptoms
17	Total Personal Adjustment

The relationship within the group investigated concerning self-concept and reading expectancy revealed that the self-concept is not related to the reading disability in this group. The two variables used were (1) total personal adjustment scores from the California Test of Personality and (2) the clients' difference between their reading instructional level and their expectancies. The statistical technique employed was the Spearman rho. The value of Spearman rho for the two variables was $-.168$.

Areas of Improvement in Reading

Responses most given by parents and school personnel in areas of client improvement were in comprehension (6) and in word recognition (6). The three clients who were observed by parents and school personnel to have made no improvement had actually made 0.5, 0.2, and 1.0 grade equivalent gains in reading according to the follow-up evaluation. The two clients who were judged by parents and school personnel to have improved in all areas made gains of 1.5 grade equivalent and 2.0 grade equivalent. Case twenty-five showed the most gains in reading achievement. For that case, parents and school personnel reported a great improvement in word recognition and an interest in reading. Case five, who had made no gains, was observed to improve slightly in word recognition and vocabulary.

In order to identify differential performance in reading improvement, the following question was asked: "In what area of reading has the client shown the most improvement?" Number of responses by category are as follows:

Comprehension-----	7
Word Recognition-----	6
Interest-----	4
Sight Word-----	3
Vocabulary-----	2
Rate-----	2
No Improvement-----	3
Improvement in all categories-----	2

School Progress

General agreement was found in the assessment of school progress and reading attitudes of the subjects by parents and school personnel. Average progress in school was defined as C work, above average progress was A and B, and below average progress as D or below in grades as reported to the parents by the school personnel. Fifteen of the twenty-five clients were observed to be doing average work in school, three were performing above average and seven were performing below average. All three clients performing above average in school had made reading gains in respect to their expectancies. However, only one case (case twelve) was observed to do independent reading.

Attitude Toward School

To determine existing attitudes toward school, parents and school personnel were asked whether the clients participated in school activities, and seemed to enjoy school. Eighteen were observed to enjoy school and were involved in varied activities. Seven did not enjoy school and showed no interest in the activities.

Data in Table VI are related to the question: "What is the most favored and least favored subject?"

The language arts area, including reading, spelling, English, and writing was the responses most frequently given as the least favored subjects in school. Mathematics was the most frequently chosen as the most favored subject; eleven clients selected this area as their most favorite. Three clients indicated no particular dislike for any subject and liked them all. Other responses for most and least favored subject were scattered among the other subjects. Clients in the elementary grades chose reading and spelling as the most disliked subjects and favored mathematics. Secondary students chose English as the most disliked subject and had varied responses for the most liked.

It is worthy to note that subjects that required the most reading activities and abilities were the least chosen, while the non-reading subjects were the subjects chosen most often as being favored.

Reading Attitudes

Sixteen of the twenty-five clients were observed by school personnel and parents to have an improved attitude toward reading. This was identified by inquiring about increased willingness to participate in reading activities and to attend to reading tasks. Nine clients were observed to have had no improved attitude toward reading and a decrease of interest in reading activities. None of nine clients were observed to do any independent reading.

TABLE VI
ATTITUDES TOWARD SCHOOL SUBJECTS

	Most Favored	Least Favored
Language Arts:		
Reading	2	9
Spelling	0	12
English	0	6
Writing	0	3
Subtotal	<u>(2)</u>	<u>(30)</u>
Science and Mathematics:		
Mathematics	11	2
Science	3	4
Subtotal	<u>(14)</u>	<u>(6)</u>
Other:		
Social Studies	3	1
Shop	3	0
Art	3	0
Miscellaneous ^a	6	0
Subtotal	<u>(15)</u>	<u>(1)</u>
TOTAL ^b	<u>31</u>	<u>37</u>

^aincludes riflery, P. E., mechanical drawing, art, music, and study hall.

^btotals add to more than 25 because clients could choose more than one category.

Independent Reading

Teachers and parents work toward two major objectives in reading: (1) to teach the child how to read and (2) to develop a habit and interest for reading that is life-long. Independent reading often is the result of good attitudes toward reading. Improvement in reading increases reading pleasure and results in further reading.

Parents and school personnel were asked if the individual client read independently. Seven clients were observed to do independent reading at home and at school, and eighteen were observed to not do any independent reading. Seven of the eight who read independently were on the elementary level.

Agreement in Reading Levels as Perceived by Parents and School Personnel

There was an irregular pattern of agreement between the instructional reading levels evaluated at the follow-up evaluation and levels perceived by parents and school personnel during the interview prior to the follow-up evaluation testing. Eleven of the twenty-five parents interviewed did not know the instructional reading level of their child at the time of the follow-up evaluation. Five responded with estimates that matched the evaluation, five reported a higher level of reading performance and four responded that their children were reading on a lower level than indicated by the follow-up evaluation performance scores. School personnel working closely with the clients reported reading levels consistent with those observed in only seven cases, while

three reported a higher reading performance level, five reported a lower reading level, and ten reported they did not know the reading performance level.

The Case Study Report

Parents and school personnel were interviewed in order to answer questions concerning the usefulness of the case study report compiled by the staff at the Oklahoma State University Reading Clinic. An attempt was made to answer the following questions:

1. Was the case study report helpful to the parents and how was it helpful?
2. Was the case study report helpful to the teachers and how was it helpful?
3. What could have been included in the case study report to have made it more helpful?
4. What could have been excluded from the case study report to have made it more helpful.

The Case Study Report--Parents

Twenty-four of the twenty-five parents found the case study report helpful. The one set of parents who had not found it helpful expressed the lack of understanding of the case study report and of the need for follow-up information for their child. These were the parents of the one subject who was reading at his expectancy at the time of the follow-up evaluation.

Number of responses by category to the question: "How was the case study report helpful?" are as follows:

Got client into a remedial reading class-----8
 More sympathetic toward client-----8
 Got tutoring for client-----6

- Got more school cooperation-----3
- Got client into Oklahoma State Summer Reading Program-----3
- Avoided possible mislabeling-----1

Parents were asked what in their opinion could have been dropped or included in the case study report to have made it more useful? Twenty-two of the twenty-five parents responded that nothing should have been dropped. Three parents suggested that the test interpretation should have been dropped or fully explained.

Number of responses by category to the question: "What could have been included in the case study report to have made it more helpful?" are as follows:

- More explanation of tests-----8
- More specific recommendations for parents-----6
- More specific recommendations for teachers-----6
- Follow-up testing-----5
- More material-----2
- Nothing-----3

Totals add to more than twenty-five responses because clients could choose more than one category.

The Case Study Report--School Personnel

A total of thirteen school personnel utilized the case study report following the clinic evaluations. The twelve who did not use the case study report gave varied reasons. In three cases the teachers did not have access to the report or communication with the parents about the evaluation. In five cases the teachers felt that it had been too long

since the evaluation with no follow-up, and therefore, felt the testing was no longer valid. In one case the teacher felt there was no problem with the client. However, she did state that she was more observant of the child in her classroom. Three of the teachers did not use the report because of the size of their classes and felt that they could not give the individual attention as stated was needed in the case study report. It is worthy to note that in all but three cases the case study report was available to the teacher and was observed to be in the client's school file folder.

The thirteen who did utilize the case study report found it useful. The following question was asked: "What was the most helpful in the case study report?" Number of responses by category are as follows:

Specific Recommendations-----	6
Information from Tests-----	5
Instructional Level-----	3
Materials-----	2

School personnel were asked what in their opinion could have been dropped or included in the case study report to have made it more useful? Thirteen responded that nothing should be dropped, eight suggested that more materials should have been included, two suggested more specific recommendations, one suggested follow-up evaluations, and two said nothing more should have been included.

Summary

The results of the obtained data were presented in this chapter. Test results are presented in tabulated form and a discussion of the data is given.

Data relative to the questions asked on the questionnaire were classified, collected into frequency distribution, and presented in the analysis of the findings of the study.

The summary of the study, the conclusions drawn, and recommendations for further study are given in Chapter V.

CHAPTER V

SUMMARY AND CONCLUSIONS

General Summary of the Investigation

The concentration upon reading proficiency has led to the establishment of clinical services for those who encounter difficulty in the development of reading abilities and skills.

This study has been concerned with changes in certain areas of reading achievement and behavior of reading clinic clients who were diagnosed at the Oklahoma State Reading Clinic. Consideration was also given to the usefulness of the case study reports that were prepared for the parents of these clients.

Specifically the purposes of this study were:

(1) to report changes in reading performance of Oklahoma State University reading clients following the initial clinical evaluation;

(2) to report current self-concept and attitudes toward reading and school as evidenced by independent reading, school progress, and participation in school activities;

(3) to determine the usefulness of the case study reports prepared by the Clinic staff for the clients' parents and school personnel; and

(4) to determine what changes could be made in the case study report to make it more helpful.

Questions were formulated to answer questions concerning the preceding purposes, and tests were administered to determine the present reading level and self-concept status of the clients.

Data were obtained concerning twenty-five clients who had previously been evaluated at the Oklahoma State Reading Center.

Treatment of the data involved a comparison of the instructional reading level scores at the initial diagnosis and the instructional reading level scores at the follow-up evaluation. Word recognition at the time of the initial diagnosis was compared with the follow-up evaluation. Information concerning attitudes toward reading and school were obtained from interviews and a self-concept measure.

Summary of the Findings--Client Performance

Reading Achievement--Absolute Level

Gains in reading achievement in terms of comparison of initial reading instructional level, which refers to the level where a person can recognize and comprehend material comfortable for learning, and the follow-up evaluation were evidenced by twenty-four of the twenty-five clients involved in this study. These gains ranged from a grade equivalent of 0.2 to 4.7.

Reading Achievement--Relative Level

Only one client gained sufficient proficiency to move his grade equivalent reading level up to his potential for achievement (expectancy). The gap between expected and actual reading levels increased for seventeen clients, decreased for six, and remained constant for one.

Reading Achievement--Actual Grade Placement

One client was reading 0.3 grade equivalent above actual grade placement, and one client was reading at actual grade placement. Twenty-three of the twenty-five clients were reading below their actual grade placement. The discrepancies between the instructional reading level and actual grade placement ranged from 0.5 to 6.6.

Word Recognition

In the area of word recognition, all twenty-five clients showed gains from the initial evaluation to the follow-up evaluation as evidenced by the Wide Range Achievement Test. These gains ranged from a grade equivalent of 0.3 to 3.8.

Self-Concept

The self-concept measure data revealed that seventeen of the twenty-five clients were below the 50th percentile on the total personal adjustment score of the California Test of Personality. That is, slightly more than two-thirds of the clients were below the percentile level achieved by the lower half of the group used to set standards for the test. In the subtests on "Self-Reliance" and "Feeling of Belonging," fifteen scored below the 50th percentile. The subtests "Personal Worth" and "Withdrawing Tendencies" indicated fourteen scoring below the 50th percentile. The subtests "Personal Freedom," and "Nervous Symptoms" showed thirteen scoring below the 50th percentile.

Performance in School--Grade Advancement

Fifteen of the twenty-five clients were obtaining passing grades in school, three were performing above average work and seven were performing below average. Seven clients had been held back in school one year. Six of these seven clients had been held back in the elementary grades and one in high school. Reaction to being retained as observed by the parents were that two profited by the retention and five had a bad reaction and did not improve.

Though seventeen of the twenty-five clients scored below the 50th percentile on the total personal adjustment section of the California Test of Personality, no relationship was found between the extent of the reading disability and the level of the clients' self-concept.

Performance in School Attitude

Persons who worked closely with the clients reported that eighteen of the twenty-five clients were observed to have improved their attitude toward school and participated in classroom and school activities. The most favored subject was mathematics and the least favored subjects included reading, spelling, English, and writing. Three of the twenty-five clients indicated no dislike for any subject.

Independent Reading

Sixteen of the twenty-five clients were observed by parents and school personnel to have an improved attitude toward reading. However, seventeen of the twenty-five clients do not read independently. Seven of the eight clients who do read independently were on the elementary level at the time of the follow-up evaluation.

Areas of Reading Improvement

School personnel and parents reported that areas of improvement were evidenced by twenty-two of the twenty-five clients. The most frequent areas reported were comprehension and word recognition. Two clients were observed to have improved in all areas and three were observed to have made no improvement.

Parent-School Personnel Perception of Instructional Reading Level

Parents exhibited little agreement in the perception of the current instructional reading level of the clients. Five parents were in agreement with the instructional reading level, four reported lower instructional reading levels, five reported a higher instructional reading level and eleven did not know the instructional reading level. School personnel working closely with the clients involved in this study reported agreement in seven cases, three reported a higher instructional reading level and five a lower instructional reading level. Ten reported they did not know the instructional reading level of the specific clients.

Use and Evaluation of the Case Study Report

Parents--Usage

Twenty-four of the twenty-five parents interviewed utilized the case study report and found it useful. One had not used the case study report. The most frequent response as to how the case study report was useful were that the parents got remedial reading class help for the client and that they were more sympathetic. "General Recommendations" from the case study report were implemented by the parents in

twenty-three of the twenty-five cases. It is worthy to note that the one parent who did not find the case study report useful did implement the "General Recommendations" section in that they enrolled the client in the Oklahoma State University Summer Reading Program.

Parents--Evaluation of the Case Study Report

Twenty-two of the twenty-four parents who utilized the case study report reported that nothing needed to be dropped from the report. Two parents felt that the "Test Interpretation" section was the most difficult to interpret in the report and should be dropped.

Six parents suggested that additional specific recommendations for the teachers be included in the case study report and six parents suggested that additional recommendations for the parents be included in the case study report to make it more helpful.

Eight parents suggested that the "Test Interpretation" section of the case study report be clarified and extended to make it more helpful.

Plans for continuous follow-up evaluations were recommended by five parents. These plans should be included in the original case study report according to the parents.

Two parents suggested that more materials be listed in the case study report for use by the teacher and parents in helping the client overcome his reading disability and make the case study report more helpful. Three parents reported that nothing should be added to make the case study report more helpful.

School Personnel--Usage

Thirteen of the twenty-five school personnel who have worked closely with the clients utilized the case study report and found it useful. Nine of the school personnel implemented the "Specific Recommendations" section of the case study report. Four school personnel utilized the information from the "Test Results" section of the case study report and formulated remediation. Three of the twelve school personnel who did not utilize the case study report did not have access to it.

School personnel who utilized the case study report reported that they felt nothing should be dropped from the report. Eight of the thirteen wanted the inclusion of more suggested materials for use with the clients. They also suggested that more specific recommendations for the teacher should be included to make the case study report more helpful.

One school person suggested that provision for follow-up evaluations should be included in the case study report and two school personnel reported that nothing should be added to make the case study report more helpful.

Conclusions

The following conclusions are presented as a result of this study.

1. Most of the clients involved in the study made gains in measured reading achievement from the initial evaluation to the follow-up evaluation; however, in spite of gains made, only one client was achieving up to reading expectancy and only two clients were achieving up to their respective grade levels.

2. The Oklahoma State University Clinic provides a valuable service to clients in terms of providing parents with suggestions for means of remediation such as tutoring, summer reading programs, and remedial reading classes

in the school system; however, the service might be more effective if teacher-parent-clinician communication was extended and provision for follow-up conferences and evaluations were provided for at the initial evaluation.

3. School personnel observations of reading attitudes of the clients did not correspond with the results of the follow-up testing and evidence of independent reading practices of the clients.

4. A majority of the clients were below average in personal adjustment. If counseling aimed at personal adjustment is needed, such a recommendation should appear in the case study report.

5. The extent of the reading disability is not related to self-concept of clients with reading disabilities.

6. A majority of the clients were reading below their actual grade placement. If these clients are presented material that has the readability of their actual grade placement, they will be unable to master such material and the failure circle will be continued.

7. After parents go to the expense and effort to have their child diagnosed at the clinic, it is unfortunate that a greater percentage of the schools and teachers do not utilize the report.

8. Case study reports will not be utilized until there is better communication between the clinic and school personnel concerning the remediation and provision of materials.

Recommendations

1. A continuing program of evaluation of clients' progress should be maintained with each clinic client evaluated at the Oklahoma State University Clinic to better serve the needs of the clients.

2. Parent interviews and teacher interviews should be held at the time of the completion of the case study report to clarify and promote recommendations stated in the case study report.

3. Further research should be initiated to provide information concerning the following areas:

- a. the identification of factors which changed reading achievement from the initial evaluation to the follow-up evaluation;
- b. the identification of factors which provided changes in attitudes toward reading and school from the initial to the follow-up evaluation;
- c. the identification of factors responsible for promoting independent reading; and
- d. the refinement of methods for measuring self-concept and relationship to independent reading, changes in attitudes toward reading, and changes in reading achievement.

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APPENDIX A

PREFACE LETTER REQUESTING PARTICIPATION OF CLIENTS

March 8, 1972

Dear

We are conducting a study concerning the academic status of students who attended the Oklahoma State University Reading Clinic during the years 1966 through 1971.

Since Delbert participated in the clinic program during this period, we would like to ask your help in carrying out this study.

I would like to have an interview with you, Delbert, and Delbert's teachers if possible. I will ask you questions concerning your experience at the Reading Clinic, the case study report and Delbert's current achievement in school. All information will be confidential.

Would you please fill out the enclosed form concerning your cooperation in this study and return it by April 1st. A self-addressed return envelope is enclosed for your convenience.

We would deeply appreciate your cooperation in helping us evaluate our service at Oklahoma State University.

Sincerely,

Shirley Warner
Instructor

SW/11b

cc
encl.

- _____ I am willing to assist in the study.
- _____ I am not willing to assist in the study.
- _____ I would be able to come to the Reading Clinic
for an interview and testing period.
- _____ I would prefer you to come to my house and arrange
for a testing period with my child.
-

You may call or write me at the following number and address to
arrange for an interview: 372-6211 Extension 6209.

Mrs. Shirley Warner
Instructor
Reading Center
Gundersen 104
Stillwater, Oklahoma. 74074

Name _____

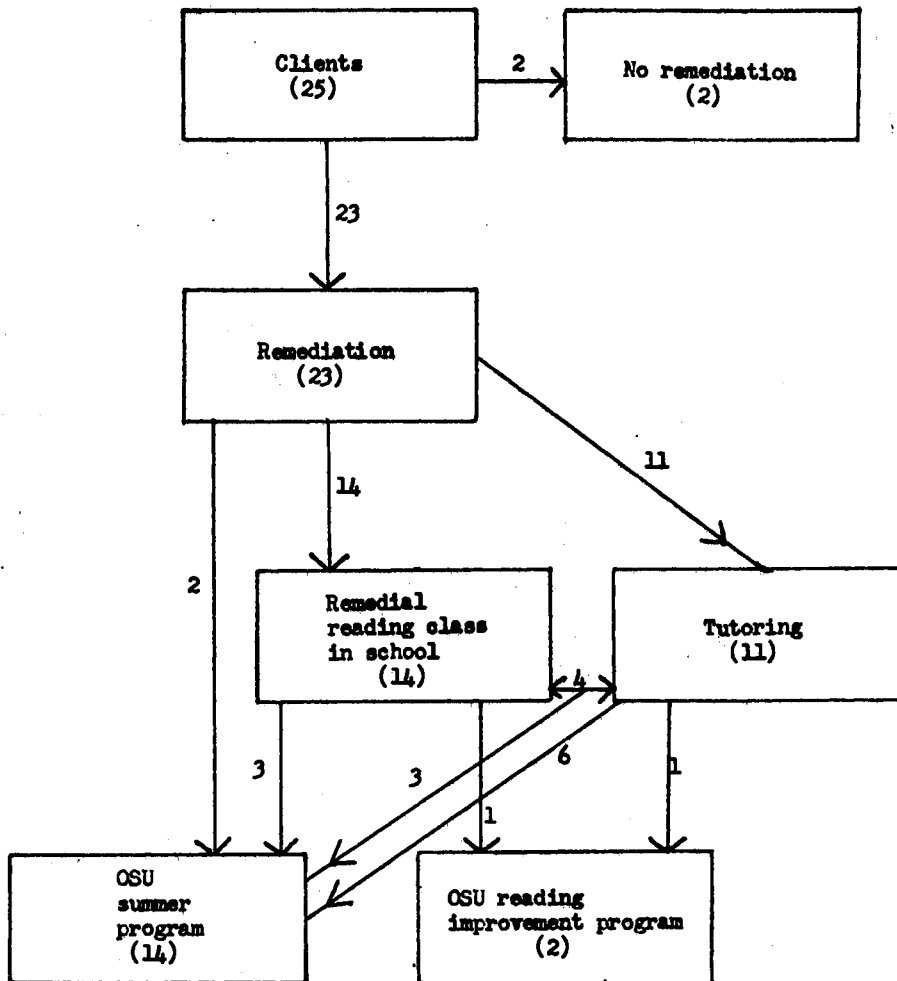
Client's Name _____

APPENDIX B

DISTRIBUTION OF CLIENTS' INSTRUCTION

Appendix B shows the special reading instruction received by the clients after the initial diagnosis at the Oklahoma State University Clinic. The client who had received the most remedial instruction (3 years of remedial reading class) did not make any gain in reading achievement. The client who had had two years of tutoring, one year of remedial reading, attended one summer program at Oklahoma State University and was retained made a gain of 2.5 years in reading achievement. The client who made the most gain (4.7 years) in reading achievement had received two years of remedial reading and attended the Oklahoma State Summer Reading Program one summer. The two clients who made gains of 3.0 years in reading achievement had received six weeks of tutoring and one year of remedial reading instruction in their school respectively.

DISTRIBUTION OF CLIENTS' INSTRUCTION



APPENDIX C
QUESTIONNAIRE GUIDE

Interview Guide

Name of Client _____ Grade Level _____

Name of Respondent _____ Relation to Client _____

Location _____ School _____

1. Is _____ doing satisfactory work in school?

Average _____

Below Average _____

Above Average _____

2. What is his/her favorite subject? _____

3. What subject does _____ dislike more than others? _____

4. In what areas do you think _____ has improved the greatest since the diagnosis at the Reading Clinic?

Vocabulary _____

Comprehension _____

Sight Word Vocabulary _____

Rate _____

Independent Reading _____

Word Recognition _____

Interest _____

Comments: _____

5. Has there been an improvement in _____'s attitude toward reading? Yes _____ No _____

6. Does _____ seem to enjoy school and is he involved in extra-curricular activities? _____

7. Does _____ read independently? _____

8. Has _____ ever failed a grade? Yes _____ No _____
A. What level? _____
B. How did _____ react to this failure? _____

9. What is _____'s reading level now? _____
10. Did you find the case study report helpful in dealing with
_____ 's reading problem? Yes _____ No _____
Comments: _____
11. What information do you feel could be dropped from the case report?

12. What information do you feel should have been included?

School Personnel Response

Name of Respondent _____ Position _____

Name of School _____

1. Is _____ doing satisfactory work in school?

Average _____

Below Average _____

Above Average _____

2. What is his/her favorite subject? _____

3. What subject does _____ dislike more than others? _____

4. In what areas do you think _____ has improved the greatest since the diagnosis at the Reading Clinic?

Vocabulary _____

Comprehension _____

Sight Word Vocabulary _____

Rate _____

Independent Reading _____

Attitude _____

Word Recognition _____

Interest _____

5. Has there been an improvement in _____'s attitude toward reading? Yes _____ No _____

6. Does he/she volunteer to join in activities in the class and to discuss with other class members? _____

7. Does he/she volunteer to read orally? _____

8. Does he/she read independently? _____

9. What is _____'s reading level now? _____

10. Did you find the case study report helpful in dealing with _____'s reading problem? Yes _____ No _____

Comments: _____

11. What information do you feel could be dropped from the case report?

12. What information do you feel should have been included?

APPENDIX D
EXAMPLE OF ORIGINAL CASE STUDY REPORT
AND FOLLOW-UP EVALUATION

THE DEVELOPMENTAL READING CENTER
Department of Education
Oklahoma State University

NAME:

ADDRESS:

PARENT'S NAME:

DATE EXAMINED:

SCHOOL:

AGE:

GRADE:

EXAMINERS:

I. Tests Administered:

- A. Wide Range Achievement Test; Reading Section, Guidance Associates, 1946.
- B. Durrell Analysis of Reading Difficulty, New Edition, Harcourt, Brace, & World, 1955.
- C. Gates-McKillop Reading Diagnostic Tests, Form I. Columbia University, 1962.
- D. The Developmental Reading Tests, Form D-A. Lyons-Carnahan, 1965.
- E. Roswell-Chall Diagnostic Reading Test. Essay Press, 1959.
- F. Keystone Visual Survey Test. Keystone View Company, 1961.
- G. Binocular Reading Test Record. Keystone View Company, 1955.
- H. Peabody Picture Vocabulary Test, Form B.
- I. Bender-Gestalt Visual Motor Test. American Orthopsychiatric Association, 1938.

- J. Harris Test of Lateral Dominance. The Psychological Corporation, Second Edition, 1958.
- K. Informal Reading Inventory, "How Baseball Began" (524 word passage at 3rd Grade Reading Level) Oklahoma State University.
- L. Wechsler Intelligence Scale for Children. Psychological Corporation, 1959.

II. Observed Behavior:

_____ was very cooperative, and no unusual mannerisms were observed. _____ willingly attempted every task he was asked to do. It was noted that when asked to retell passages read both orally and silently, he made up memories in order to complete the story. This illustrated his desire to complete a task that was required during testing.

When asked to do a task at frustration level, _____ was willing and continued without encouragement from the examiner.

III. Test Results:

A. Wide Range Achievement Test (Reading Section).

This is a test used to measure the ability to recognize words in isolation not in context.

	<u>Grade Equivalent</u>
Basal Level 2	2.6
Instructional Level	3.3
Frustration Level	6.1

B. Durrell Analysis of Reading Difficulty.

This is an individual test designed to measure specific areas of reading performance. The oral and silent reading sections consist of a series of timed paragraphs of graded difficulty followed by comprehension questions. The word recognition and word analysis section tests ability to identify lists of words on both flash and analysis presentations. The visual memory section tests memory of words with a two to three second presentation. The sounds section measures the ability to hear and use the sounds in words and the sounds in letters. Results are recorded in grade level.

Oral Reading	3.5
Silent Reading	2.75
Word Recognition	
Flash	3.25
Analysis	3.25

Visual Memory of Words	
Primary	3.5
Hearing Sounds in Words	3.5
Oral rate	3.0
Learning Rate	2 out of 5

C. Gates-McKillop Reading Diagnostic Test, Form I & Form II.

This is an individual test designed to measure specific areas of reading performance. The areas are as follows: oral reading total, oral reading error analysis, words-flash presentation, words-untimed presentation, phrases-flash presentation, recognizing and blending common word parts, giving letter sounds, naming capital letters, naming lower-case letters, recognizing the visual form of sounds (nonsense words, initial letters, final letters, vowels) auditory blending, spelling oral vocabulary, syllabication, and auditory discrimination. Results are indicated in grade level of normal progress based on oral reading grade level.

The key to the chart on test scores is as follows:

NP = Normal Progress
L = Low Progress
VL = Very Low Progress

	Form I	Form II
Oral Reading	2.6	2.4
a. Omissions, Words	NP	NP
b. Additions, Words	NP	L
c. Repetitions	L	NP
d. Mispronunciations	L	L
e. Full Reversals	NP	NP
f. Reversal of Parts	NP	NP
g. Total Wrong Order	NP	NP
h. Wrong Beginnings	L	L
i. Wrong Middles	L	NP
j. Wrong Endings	NP	NP
k. Wrong Several Parts	NP	VL
Words: Flash Presentation	3.5	
Words: Untimed Presentation	3.1	
Phrases: Flash Presentation	5.4	
Recognizing and Blending Common		
Word Parts	NP	
Nonsense Words	L	
Initial Letters	NP	
Final Letters	NP	
Vowels	NP	
Auditory Blending	NP	
Auditory Discrimination	13 out of 14	

D. The Developmental Reading Tests, Form D-A.

This is a group instrument designed to measure silent reading abilities in the following areas: Recognition (Words in Isolation, Words in Context, Orientation), Error Analysis (Initial Errors, Middle Errors, Ending Errors, and Orientation Errors), Recognition Techniques (Visual Analysis--Locating Elements Syllabication, Locating root-word--and Phonetic Knowledge--Word Elements, Beginning Sounds, Rhyming Sounds, Letter Sounds), and Word Synthesis. Scores are in grade equivalent.

Words in Isolation	3.5
Words in Context	3.0
Orientation	3.5
Initial Errors	3.5
Middle Errors	3.75
Ending Errors	4.0
Orientation Errors	3.5
Word Elements	3.5
Rhyming Sounds	3.5
Word Synthesis	3.0

E. Roswell-Chall Diagnostic Reading Test of Word Analysis Skills.

This is an individual test of word analysis skills. The basic skills measured by this test provide an estimate of the pupil's strengths and weaknesses in word recognition. The skills measured are single consonant sounds and consonant combinations, short vowels, long vowels, rule of silent e vowel combinations, and syllabication.

I. Single Consonant Sounds	
Consonant Combinations	adequate mastery
II. Short Vowels	lacks mastery
III. Long Vowels and Rule of Silent e	lacks mastery
IV. Vowel Combinations	adequate mastery
V. Syllabication	lacks mastery

F. Keystone Visual Survey Tests:

This is a survey test used to screen for adequate vision.

Vision	20/20
--------	-------

G. Binocular Reading Test Record.

This test consists of a story mounted on each of four stereoscopic cards. The purpose of the test is to detect the extent to which each eye functions when both eyes are being used in reading. In most instances, all pictures or words before each eye are reported. Omissions of a

substantial number or all the word is a symptom of a visual problem. No marked preference indicated in the reading act for either:

Right Eye	20/20
Left Eye	19/20

H. Peabody Picture Vocabulary Test. Form B

This is an individual test of the ability to associate spoken words with pictures. It is designed to give an estimate of intelligence based upon vocabulary development.

Mental Age	9-10
Intelligence Quotient	106
Percentile	68

I. Bender-Gestalt Test.

This is a clinical test, individually administered, designed to measure and provide an index of perceptual motor maturation.

Normal Progress

J. Harris Test of Lateral Dominance.

This is a test to measure lateral dominance which means the preferred use and better performance on one side of the body as compared to the other side. Results with these tests indicate that they are sensitive indicators of directional confusion.

Hand Dominance	Right
Right Hand Dominance	
Eye Dominance	Right
Foot Dominance	Right

K. Informal Reading Inventory.

"How Baseball Began." This is a 524 word passage at the 3rd grade reading level. It is designed to detect reading error patterns.

	Percent of Error
I. Visual Perception	28%
A. Location	28%
1. Initial	00%
2. Medial	18%
3. Final	10%
B. Syllabic Division	00%

C. Directional Confusion	00%
II. Visual-Auditory Perception	00%
III. Sight Word Errors	12%
IV. Behavioral Characteristics	42%
A. Omissions	18%
B. Additions	05%
C. Repetitions	05%
D. Corrections	16%
V. Language Errors	15%
A. Structural Analysis	07%
B. Anticipation Errors	08%

L. Wechsler Intelligence Scale for Children.

This is an individually administered test designed to determine general intellectual maturity in both verbal and performance areas. It consists of twelve subtests measuring specific cognitive skills which underlie reading ability. A scaled score of 10 is average for each subtest.

Verbal Tests	Scale Score	Performance Tests	Scale Score
Information	10	Picture Completion	9
Comprehension	12	Picture Arrangement	8
Arithmetic	9	Block Design	7
Similarities	11	Coding B	12
Vocabulary	9	Mazes	8
Digit Span	8		
Verbal IQ	99	Performance IQ	92
		Full Scale	95

IV. Test Interpretation:

_____ scores on the WISC would place him in the average range of intellectual maturity. His verbal scale and performance scale showed no marked discrepancy. The performance scale was prorated on 5 subtests, substituting the mazes subtest for the object assembly subtest. His scale score on the mazes subtest would indicate weak perception and insight. This is further substantiated by his lower scale score on block design; which would further indicate a weak ability in abstract and academic thinking. _____ behavior during the block design subtest indicated a definite tendency to give up.

His substitution of the blue color for the red in block design, may indicate a need to refer for a check on color blindness. His scale score of 8 on the picture arrangement subtest indicated a weakness in sequential ability. Finally, his subtest score of 8 on digit span reflects an inability to

concentrate on a pressure task. This last statement would also be substantiated by observed behavior of mazes, block design, and picture arrangement subtests.

Though some of the subtests indicate specific weak areas, _____ overall mental maturity should enable him to function at an average rate with most school tasks.

Based on the Bond formula for reading expectancy, _____ should be operating at the end of the third grade level of performance. His instructional level based on the Durrell Oral Paragraphs is 3.5, however, other oral readings indicate a performance nearer the 3.25 level. The form I of the Gates-McKillop indicated an oral reading level of 2.6 while form II indicated a level of 2.4. This much lower score can be explained by the early repetitions on the first selection in each of the forms. The informal inventory "How Baseball Began" (3.0 grade level) was read near frustration level. Evaluating this information, it can clinically be estimated that _____ should be reading instructionally at the 3.25 level of difficulty.

Considering his visual perception skills _____ has skills that are near his instructional level. However, the Gates-McKillop subtest Nonsense Words reported low progress. This requires the student to visually recognize the forms of words from an auditory stimuli. Following this an analysis was made of oral reading from the Gates-McKillop, Form I. This revealed that _____ errors were on wrong beginnings and wrong middles. Examples of these errors are in the following "face for place" and "peck for peek" respectively. On form II of the Gates-McKillop _____ visual pattern was marked by errors in wrong beginnings and wrong in several parts. Examples of these errors are as follows: "making for taking" and "went for wanted" respectively. On the informal inventory his error pattern revealed errors in medial word parts--Example of this error would be "cleaning" for "clearing" and "strong" for "stranger".

Also on the informal reading _____ made a significant number of final errors. However, these errors were made in several parts of the word which indicates guessing the word from the initial letter only. These errors would correspond to the Gates-McKillop Form II Wrong in Several Parts category. Significant errors were made in visual perception of beginning part, medial part, and several parts.

The errors on visual perception of medial word parts can be explained by _____ score on the Roswell-Chall test. This test showed that _____ had inadequate knowledge of the short vowel sounds. This accounts for his errors on the medial position of word parts. His errors on the beginning part were due to insufficient inspection of the word.

_____ errors on the final word part on the informal and the wrong in several parts categories on the Gates-McKillop can be explained in part by his lack of knowledge of common word endings on the subtest, recognizing and blending common word parts of the Gates-McKillop.

Both the flash and analysis scores of the Durrell Test and Gates-McKillop Test indicated that _____ has adequate word recognition and analysis skill for his instructional level. The Wide Range also shows that _____ has adequate word recognition skills. This was also supported by the Gates-McKillop vowels subtest. _____ four correct responses were long vowel sounds and all the short vowels were missed. However, the Roswell-Chall did indicate that _____ lacks the knowledge of short vowel sounds.

Considering _____ auditory skills, _____ has adequate skills for his instructional level. The Gates-McKillop Test indicated normal progress on the subtest of recognizing and blending common word parts and auditory blending. A closer look at the subtest of recognizing and blending common word parts shows that _____ has adequate knowledge of beginning blends. However, he did not know common endings such as "ight", "ade", and "emp". _____ had no difficulty on the auditory discrimination subtest of the Gates-McKillop. The Durrell Test of hearing sounds placed _____ at the 3.5 grade level, however, he failed the phonetic spelling test. This was expected for his instructional level. The Bond-Clymer-Hoyt also indicated adequate progress in rhyming skills, word synthesis, and sounds of word elements. There were no significant auditory errors in the extended oral reading.

When analyzing _____ behavior errors on the extended oral reading it was noted that _____ had a significant number of omission errors and correction errors. The omissions on this test indicate an unsatisfactory rate. This story was read at 62 words per minute. This was probably due to the length of the selection because _____ rate from the Durrell was 110 words per minute. The number of correctional errors were due to the reader's failure to use context, visual clues, and phonetic generalizations. This again can be accounted for by the length of the passages, and the reader reading near frustration level.

During the administration of the Durrell Test the learning rate test of five words was given. _____ remembered only 2 words after 20 minutes. Then the words were retaught and tested after 40 more minutes. At that time only four words were remembered. This indicated that _____ can learn through the visual-auditory method, but with much difficulty.

Tests to establish any problem with reversals and perception were given. These tests indicated no problem. _____ has adequate vision in both left and right eye. The Bender-Gestalt indicated normal progress for his age. The Harris Test of Lateral Dominance indicated that _____ hand dominance is right, his eye dominance is right, and his foot dominance is right. Therefore, _____ has no problem with perception except the specific middle word part perception previously mentioned.

V. Recommendations:

General Recommendations:

It is recommended that _____ receive instruction within a classroom environment. This instruction should begin at the 3.25 grade level. Since this level is below his expectancy, _____ can benefit from special instruction in the reading classes at _____. However, it should be noted that _____ problem is not serious in nature and can be remediated quickly.

Specific Recommendations:

1. It is recommended that _____ not be instructed from a visual-auditory approach to reading. Because _____ did not succeed on the learning rate test.
2. It is recommended that instruction on the short vowel sounds begin immediately. Materials that can be used are as follows:
 - a. Put in the right word. It must have a short vowel.

The boy ran after the _____.
boat game cat

- a. Exercises with short vowels from the following materials:

Phonics Workbook, Book One	Phonics Skilltext
Modern Curriculum Press	Charles E. Merrill

Working with Sound	Language Master
Barnell-Loft	

- a. Circle the words with the short vowel sounds:

blow	duke	fan
got	fun	jail
soap	fame	bed
sleep	sat	hot

3. It is recommended that _____ have exercises that cause him to substitute initial consonants. The following is an example of this type of exercise:

- a. Write the correct word in the blank.

This is the _____ for all books.
face place lace

- b. Make a word naming something to eat by putting the first letter of a word on the left in the right blank. The first one is done for you.

soon _____ eaches but _____ ake
s _____ oup
cook _____ ookies people _____ utter
puppy _____ corn _____ eanuts

- c. Exercises in alphabetizing.

4. It is recommended that _____ have exercises that cause him to discriminate medial word parts.

- a. The following is an example of this type of exercise:

Take a _____ at the Christmas presents. peck peek peak

These should be made from _____ errors. They can also be found in the following books:

Phonics Workbook, Book Two, Modern Curriculum Press.

Merrill Linguistic Workbook, C. E. Merrill.

5. It is recommended that _____ use the controlled reader (a machine that projects a line of a story at a time) to control his reading rate so that he will not omit lines of reading. He should use the shadowing device.

6. It is recommended that exercises be made to teach common ending word elements. Some examples are the following:

- a. Put in the right word. It must end like the key word.

talk We had a brisk _____.
chalk walk run

- b. See how many words you can make that rhyme with the following words. Use each of them in a sentence.

bright	made	trick	ridge
hemp	well	scribble	home

Oklahoma State University
Reading Center
Stillwater, Oklahoma

Follow-Up Report

Name:

Parents' Name:

Address:

Date:

Initial Testing Date:

Initial Testing Age:

Age:

Expectancy:

Examiner:

I. Tests Administered:

- A. Wide Range Achievement Test: Reading Section, Guidance Associates, 1946.
- B. Kaleidoscope Readers: Oklahoma State University, 1970.
- C. California Test of Personality: Elementary Series, California Test Bureau.

II. Observed Behavior:

_____ was referred to the Oklahoma State Reading Clinic in October, 1969, by his parents for diagnosis of reading problems. He is in the sixth grade and is doing average work in school.

III. Test Results:

A. Wide Range Achievement Test:

This test measures the ability to recognize and pronounce words in isolation at sight.

Initial Testing	Follow-Up Evaluation
Basal Grade Score 2.6	Basal Grade Score 4.1
Performance Grade Score 3.3	Performance Grade Score 5.0
Ceiling Grade Score 6.1	Ceiling Grade Score 7.0

B. Kaleidoscope Readers:

This test is an informal inventory. It is designed to determine the subject's oral reading comprehension and reading rate.

Initial Testing
Durrell Analysis of Reading Difficulty
 Instructional Reading Level 3.2

Follow-Up Evaluation
 Instructional Reading Level 5.5

C. California Test of Personality:

This is a test to identify student problems in personal and social adjustment. Only the personal adjustment section of the test, with its six subtests, was given.

	Score	Percentile
IA. Self-Reliance	7	40
IB. Sense of Personal Worth	10	80
IC. Sense of Personal Freedom	9	40
ID. Feeling of Belonging	10	40
IE. Withdrawing Tendencies	7	50
IF. Nervous Symptoms	10	70
Total Personal Adjustment	53	50

IV. General Recommendations:

It is recommended that _____ be instructed at the 6.0 reading level within a classroom environment. Materials should be provided in the classroom to improve word attack skills. _____ should be encouraged to read for his own enjoyment. Oral reading should be kept to a minimum.

V. Specific Recommendations:

- A. To teach vowel sounds the following exercise types are recommended:
1. Workbooks where these exercises can be found are as follows:
 - a. Eye and Ear Fun, Book 3 and 4, McGraw-Hill
 - b. Time for Phonics, Book C, McGraw-Hill
 - c. Working with Sounds, Book C, Barnell-Loft
- B. Activities for teaching sound knowledge are suggested. These can be found in the following:
1. Guidebook to Better, Economy
 2. Conquests in Reading, McGraw-Hill
- C. Activities for increasing language facility: Bill Martin's Sounds Of: Series can be used to stimulate discussion and imagination, Level 6.
- D. If _____ can be self-motivated to read independently, the reading center will provide him with material. He should read books with a high interest level on the 5.0 reading level.

VITA

Shirley Margaret Warner

Candidate for the Degree of

Doctor of Education

Thesis: A FOLLOW-UP STUDY OF SELECTED CLINIC CLIENTS FROM THE OKLAHOMA STATE UNIVERSITY READING CENTER FROM 1966 THROUGH 1971

Major Field: Elementary Education

Biographical:

Personal Data: Born in Delaware, Ohio, October 25, 1935, the daughter of Floyd and Virgie Jones.

Education: Attended public schools in Delaware, Ohio. Graduated from Frank B. Willis High School in 1953. Attended Ohio Wesleyan University and Indiana University; received a Bachelor of Science degree from Oklahoma State University, Stillwater, Oklahoma in 1963; received Master of Science degree in Elementary Education from Oklahoma State University in 1967; completed requirements for the Degree of Doctor of Education in May, 1973.

Professional Experience: Remedial Reading Teacher, Stillwater School System 1967-1969; graduate assistant in the Reading Center at Oklahoma State University, 1970-1972; Reading Resource Specialist, Stillwater School System 1972-.