

SURVEY OF THE APPROACH TO REPORTING
A CASE STUDY IN UNIVERSITY AND
COLLEGE READING CLINICS

By

GLEN RALPH ANDERSON

Bachelor of Science
Southwest Missouri State College
Springfield, Missouri
1958

Master in Education
Drury College
Springfield, Missouri
1960

Specialist
Central Missouri State College
Warrensburg, Missouri
1969

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Thesis Approved:

David D. Rau
Thesis Adviser |

Robert L. Brown

Jarvis Warner

Gene L. Post

D. Burhan
Dean of the Graduate College

769786

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CHAPTER I

THE PROBLEM

Introduction

The educator's growing concern about reading disability cases is evidenced by the number of college and university reading clinics which have been established in recent years. Gray (1968) reported the increasing awareness of the reading disability problem in his study of the origin and development of the college and university reading clinic in the United States. Based upon questionnaire returns, the total number of clinics reporting establishment from 1920 - 1930 was four, or two per cent of the total number now established; from 1931 - 1945, there were thirteen clinics or eight per cent of the total number reporting establishment; from 1946 - 1955 there were forty-four, or twenty-seven per cent of the total number; and from 1956 - 1967, there were one hundred and three, or sixty-three per cent of the total number.

Although there is much agreement in regard to the concern for the reading disability case, a review of the literature revealed little agreement in regard to the diagnosis and remediation of the reading disability case in college and university reading clinics. Harris (1961)

summarized the diversity in diagnostic and remediation practices of university and college reading clinics in his statement concerning how clinics vary greatly in their specific objectives, in their organization, and in their modes of functioning, making it impossible to give a generalized description of how reading clinics work. He further stated that it is necessary to describe a number of different kinds of reading clinics and to indicate the points of differences and agreement. Berg (1963) supported the summary of Harris by his statement that there is difficulty in suggesting improvements for an area which offers experiences of as diverse a nature as do reading clinics.

The increasing interest and concern shown for reading disability cases plus the disagreement found in the literature concerning diagnostic and remedial practices employed in college and university reading clinics pointed to a need for further examination of the practices of these clinics. An examination of the practices of college and university reading clinics through an analysis of a case study prepared by them should help in providing a better understanding of their practices. Furthermore, this examination should point out areas of agreement in regard to diagnostic and remediation practices of these clinics.

Statement of the Problem

The purpose of this study was to determine areas of agreement concerning diagnostic and remedial practices in

college and university reading clinics through an investigation of the case study prepared by each of the responding clinics. Specifically, a reading disability case was selected, and a reading test and an individual intelligence test were administered to this individual. The test scores, supplemented by other basic information, were made available to the college or university reading clinicians who reported the case study. Using this information, the clinicians were asked to request all the data which they believed would be needed to complete a case study for this individual. The data requested by the clinicians was made available to them, and they then wrote a case study of this reading disability case.

A content analysis of the case studies was made in an attempt to answer the following questions:

1. Was there agreement in test interpretation?
2. Was there agreement in diagnosis when identical tests were administered?
3. Was there agreement in diagnosis when different tests were administered?
4. Was there agreement in prognosis when identical tests were administered?
5. Was there agreement in prognosis when different tests were administered?
6. Was there agreement in remedial direction when identical tests were administered?

7. Was there agreement in remedial direction when different tests were administered?

Definition of Terms

The following definitions and clarification of terms were applied throughout this study.

Case Study: The case study was the college or university reading clinician's written report of the synthesis and the interpretation of the material concerning the subject's reading disability.

Reading Clinic: This referred to the reading clinic in a university or college in the United States which offered the master's degree, the doctor's degree, or their equivalents. It was an organization to which persons came for individualized diagnosis and treatment of reading problems.

Test Interpretation: Test interpretation was the college or university clinician's assessment of the meaning and significance of the test results.

Diagnosis: Diagnosis was the identification of weaknesses or strengths of the subject's ability.

Prognosis: Prognosis was the estimate of the duration and outcome prediction of the correction of the subject's reading disability.

Remediation: Remediation was the prescriptive program planned for the subject on the basis of his individual needs as indicated by the clinician's final diagnosis.

Need for the Study

The number of reading disability cases enrolled in the schools (Bond and Tinker, 1967) indicated the need for additional information in the area of diagnosis and remediation. The concern of the educators (Gray, 1968) for the reading disability case indicated their readiness for information concerning the diagnosis and remediation of the reading disability case. The extent of disagreement found in the literature concerning diagnostic and remediation practices in college and university reading clinics suggested the need for further study of their practices.

Basic Assumptions

The proposed study was based on the assumption that there was a professional need for information concerning the diagnosis and remediation of disabled readers. It was also based on the assumption that it was possible to write a case study based upon information which was obtained without direct contact with the subject. Further assumptions made were that the clinician would write the case study with the usual care employed when the individual was personally diagnosed at the clinic, and that content analysis of case studies would provide an indication of areas of agreement in test interpretation, prognosis, diagnosis, and remediation of the reading disability case.

Scope of the Study

The study included a random sample of those universities and colleges in the United States which operated reading clinics and offered the master's degree, the doctor's degree, or their equivalents. Although the number of clinicians was considered wide in scope, they were all diagnosing the same individual from information provided by the investigator. It was not a simulated information study; it was concerned with an actual reading disability case. Furthermore, this study was confined to a complex reading disability case as defined by Bond and Tinker (1967).

Limitations of the Study

It was impossible for the clinicians to observe the subject of the case study in person; hence, it was necessary for them to utilize information which was obtained without direct contact with the subject. Due to the amount of time involved in testing the subject, the abilities of the subject may have increased or decreased from test to test. The qualifications and training of clinicians responsible for the case study may have varied from center to center. Since the study relied upon agreement to participate, the sample may have produced a biased group.

Organization of the Study

Chapter I introduced the problem to be studied. It included the statement of the problem, definition of terms,

the need for the study, the basic assumptions, the scope of the study, and the limitations of the study.

Chapter II reviewed the literature concerning the study. The survey of the literature was considered from two standpoints: (1) the review of the literature concerning the college and university reading clinics, and (2) an examination of the case study approach.

Chapter III discussed the methodology of the study. This chapter included selection of the sample for the study, preparation of the case, and procedures in analyzing data.

The findings of the study were discussed in Chapter IV. This included the attempts to answer the questions concerning agreement found in test interpretation, diagnosis, prognosis, and remediation in college and university reading clinics.

The study was summarized in Chapter V and conclusions and recommendations were made pertaining to the need for further studies in this area.

CHAPTER II

REVIEW OF THE LITERATURE

Although the literature concerning diagnosis and remediation of the reading disability case constituted a great body of research, that which was specific to the diagnostic and remediation procedures in college and university reading clinics was limited. The survey of literature was confined to the studies of diagnostic and remedial procedures in college and university reading clinics. The survey of the literature was considered from two standpoints: (1) the characteristics of college and university reading clinics including clinic organization; testing instruments and procedures; groups served; and programs of remediation; and (2) an examination of the case study approach.

Characteristics of Clinics

Clinic Organization

Kopel and Geerdes (1942), in a study planned to secure descriptions of current diagnostic and therapeutic practices in clinics dealing with poor readers, found that in clinics which employed the services of two or more persons a line-and-staff organization was followed. The principal officer

was almost always known as the director. This official was responsible for the general conduct of the clinic's affairs; he usually exercised control over procedure in handling cases, choice of clinical methods, and formulation of other policies. In addition he frequently took an active part in the diagnostic and remedial work of the clinic, and he represented the clinic in its relationships with allied agencies, the schools, and the public. In some clinics the director did most of the work. In others he was assisted by a small staff which consisted usually of a psychological clinician or pediatrician, one or two social workers, and graduate assistants who were used for routine administrations and interviews. In large clinics the responsibilities of the various staff members were relatively well defined. Quite frequently the clinic staff included an assistant director, a psychologist, psychiatrist, psychiatric social worker, and a secretary. In addition, other clinics mentioned one or more of the following specialized workers: psychological examiners, psychologists in charge of reading, remedial teachers, consultants of various kinds, nurses, intake secretaries, testing supervisors, telebinocular operators, audiometer operators, pediatricians, and ophthalmologists.

The size of the staff and the availability of specialists for referral appeared to be determining factors in the comprehensiveness of the diagnosis of the reading disability case. According to Kopel and Geerdes (1942) a comprehensive

diagnosis required a relatively elaborate organization, and where clinic staffs were small, there was a tendency for a less complete diagnosis. For example, the clinic which lacked the services of a psychiatrist would not include a full neurological examination, and in clinics which did not employ social workers, the case history would be in a more abbreviated form. It was also found that some small as well as large clinics had part-time or full-time specialists who provided meticulously thorough and complete examinations of that function related to reading disability in which they were interested.

Kopel and Geerdes (1942) summarized their findings in regard to clinic organization by stating that although wide variations existed, the professional qualifications of clinical personnel appeared to be excellent if the criteria used for this judgment was their academic training and their psychological-educational experience. They also found that there was much evidence that workers from the professions of social work, medicine, optometry, and ophthalmology were contributing their efforts to the diagnosis and treatment of reading problems.

Boyd and Schwiering (1950) in a questionnaire survey of clinics found that the personnel of the clinics surveyed varied with the size of the clinic staff and the kinds of services offered. Clinic staff listings included the same types of personnel as listed by Kopel and Geerdes (1942). However, Boyd and Schwiering (1950) were more specific in

regard to the numbers of clinics offering their services. Of the 76 clinics represented in the returns, the various personnel services were offered in the following number of clinics: psychologist, 59; psychiatrist, 23; part-time psychiatrist, 4; doctor, 23; part-time doctor, 3; social worker, 23; graduate students, 39; remedial teachers, 11; professors of education, 7; speech therapists, 6; clinicians, 4; and teacher counselors, 3.

Barbe (1955) in a study of reading clinics found that more of the directors of the clinics had doctor's degrees than had master's. He also found that the majority of the personnel of the clinics had master's degrees.

In a comprehensive study designed to gather information of a detailed nature about the operation of university and college reading clinics serving elementary and secondary school pupils, Adams (1958) selected directors of ten clinics who were individuals of national reputation. In regard to clinical personnel of these ten clinics, Adams found that educators and/or psychologists supervised most of the reading clinics. They had available to them specialists of many areas although these specialists were not, in every case, associated directly with the clinics. College students were used in the operation of all the centers studied. Seven of the centers required that the students be graduates, and two stipulated that the graduate must hold the master's degree before participating in the clinic work.

Franklin (1969) in a survey of diagnostic procedures in university and college reading clinics reported that the basic diagnostic endeavor was undertaken either by persons who were working in some capacity in the department of education or psychology and who held a Ph.D. or Ed.D. degree, or by persons who were students working toward advanced degrees and had completed specific courses in the field of reading. She further found that the services of the following specialists were utilized in varying amounts by the reading clinics: optometrist, ophthalmologist, neurologist, pediatrician, psychiatrist, dentist, physician, social worker, and audiologist. She found that the diagnostic services of a physician were provided for a greater number of clients than were the services of other specialists.

Testing Instruments and Procedures

Testing of vision. Kopel and Geerdes (1944) reported that approximately sixty per cent of the clinics studied by them employed the telebinocular, and, in some instances, additional procedures as well. Less agreement in regard to the extent of the utilization of visual examinations was found in the survey conducted by Boyd and Schwiering (1950). Approximately thirty-four per cent of the responding clinic directors indicated that some form of visual examination was administered. Approximately eighteen per cent used a telebinocular for screening purposes.

Bond and Botel (1952) found that eight of ten clinics surveyed by them considered the testing of vision and six clinics reported the use of the ophthalmograph. Adams (1958) found that the Keystone Visual Survey was used by all ten of the clinics surveyed by him. Next in rank was the Snellen Chart which was used in six of the centers in addition to the Keystone Visual Survey. Gray (1968) in his national survey of university and college reading clinics found that approximately seventy per cent of the responding clinic directors administered some form of a vision test.

Tests of hearing. Kopel and Geerdes (1944) reported that for determining auditory acuity, only five per cent of the clinics depended solely upon the whisper test; sixty-five per cent employed some type of audiometer; another twenty per cent obtained medical appraisals; and the remaining ten per cent apparently did not test this function. Boyd and Schwiering (1950) found that twenty-eight per cent of the clinics used an audiometer for screening purposes. Three of the ten clinics studied by Bond and Botel (1952) owned audiometers and tested auditory acuity systematically. Adams (1958) reported that auditory screening was conducted by all ten of the clinics studied by him, and that all of the clinics did the screening through the use of an individual audiometer test. Sixty-eight per cent of the clinics studied by Gray (1968) administered an auditory acuity test.

Tests of laterality, perception and speech. Eye and hand dominance, the most commonly noted aspects of laterality, were ascertained in thirty-three per cent of the clinics studied by Kopel and Geerdes (1942). Adams (1958) reported that all of the clinics studied by him made an appraisal of motor skills, laterality, and dominance, and that this was done primarily by means of informal devices and techniques which were described as selected activities usually developed by the center itself. Gray (1968) reported that approximately one per cent of the clinics studied gave perceptual tests, and that less than one per cent administered a speech test.

General health. Kopel and Geerdes (1942) found that seventeen per cent of the clinics required patients to obtain medical examinations from their private physicians, another sixth depended solely upon health reports from school doctors and nurses, and a similar proportion had no medical facilities and seemed to give no attention to general health in their diagnostic procedure. The remaining fifty per cent, approximately, had staff physicians, most of whom devoted full time to clinic duties. However, only half of these doctors included more than eyes and ears in their health appraisals. A partial explanation of this finding may have been that many medical doctors had other major responsibilities, since a third of them were listed as staff psychiatrists and also, in some instances, as directors of their respective clinics. Also, some of these

clinics had access to health reports from referring schools. Although systematic and thorough health examinations were provided in some centers, they were definitely not a part of the typical clinical routine.

Boyd and Schwiering (1950) found that fifty-four per cent of the clinics reported a physical check for each of their cases. A local doctor or family physician examined the children in fifty-six per cent of the forty-one clinics requiring a physical check. Boyd and Schwiering (1950) also reported that many of the clinics referred cases to outside agencies for examination. Some of these recommended only the serious cases for complete physical check. Persons who gave the physical examinations were family or local physicians, pediatricians, psychiatrists, school or college doctors, medical school or health department personnel.

Mental status. In determining mental status, all of the clinics studied by Kopel and Geerdes (1944) administered the Terman, Terman-Merrill, or Kuhlmann revisions of the Binet-Simon as their basic procedure. This was supplemented in all but three of the clinics by a non-verbal test or some part of a performance battery. Special provision for the hard of hearing and the visually handicapped, respectively, was reported by one clinic.

Boyd and Schwiering (1950) reported that all of the clinics appeared to give one or more of the individual mental tests. Some form of the Binet-Simon, usually the Stanford or Kuhlmann revisions, or the Wechsler-Bellevue

was used. More than eighty-six per cent gave some form of the Binet-Simon; fifty-six per cent used the Binet-Simon and the Wechsler. The Minnesota Pre-School Test was administered in seventeen per cent of the clinics. These individual mental tests were supplemented in fifty-six per cent of the clinics by a non-verbal or performance tests. Various parts of these performance tests and other scales were used as separate measures to supplement the verbal tests administered. A number of group tests of mental ability were used. Nine per cent of the clinics used one or more group tests in addition to the individual test. Less frequently mentioned were special aptitude tests. About fifteen per cent of the clinics gave one or more such tests.

Bond and Botel (1952) reported that nine of the ten clinics studied by them gave an intelligence test. Adams (1958) found that the Revised Stanford-Binet Test of Intelligence was used at every center studied by him for the purpose of appraising general intellectual capacity. In addition to or as an alternate to the Revised Stanford-Binet Test of Intelligence, nine of the ten clinics indicated that they used the Wechsler Intelligence Scale for Children. Approximately seventy-eight per cent of the clinics studied by Gray (1968) administered some form of an intelligence test to their clients.

Appraisals of emotional adjustment. Appraisals of emotional adjustment were omitted in thirty per cent of the

clinics studied by Kopel and Geerdes (1942). In the remaining centers the most common procedure consisted of observation of the child's general reactions and administration of some personality schedule, rating scale, or other paper and pencil test. Another common procedure reported by fifty per cent of the clinics was the psychiatric interview with the subject and, sometimes, with his parent. Psychologists and social workers performed this work in some clinics, although the task was usually delegated to a psychiatrist in the clinic or in an allied agency. Social and psychiatric social workers with these exceptions, were reported only in clinics which were staffed by psychiatrists.

Boyd and Schwiering (1950) reported that personality tests seemed to be as widely used as mental and achievement tests in clinics. Informal measures which were given were sentence completion, drawing, and plan construction.

Adams (1958) reported that information concerning personality and attitude were available to the centers through the use of the interview and case history data which were compiled by personnel of the clinics and interested individuals outside the organization. The Rorschach technique was identified as the most popular formal approach in this area of the case study. Gray (1968) found that forty-one per cent of the clinics studied by him made some form of personality appraisal.

Tests of reading ability. A standardized test of reading ability was employed by all of the clinics studied

by Kopel and Geerdes (1944). Cited most frequently, in the order of their popularity, were the Gates, Durrell-Sullivan, Monroe, Gray Oral, Iowa, and New Stanford tests. Practically all of the other well-known standardized reading and reading-readiness tests were mentioned. In many clinics one or two tests were favored and were administered to every individual; the majority of clinics selected from a relatively small list of three to six instruments. Over fifty per cent of all clinics apparently appraised reading ability and defined reading retardation through the exclusive use of a standardized reading test. In other centers supplementary information was obtained through one or more of the following procedures: interviews with the reader and his teachers, observation of attitudes toward books and reading tasks, informal tests of phases of reading not measured by standardized tests, oral reading of passages, oral spelling, and examination of recreational reading choices. All of the foregoing procedures were rarely employed in any single clinic.

Boyd and Schwiering (1950) found that over one-half of all clinics apparently appraised reading ability and defined retardation through standardized reading achievement tests. About sixteen per cent of the clinics failed to mention the names of tests but stated that they had on file a large number of all kinds to give when needed. The most widely used were the Stanford and the Metropolitan. Others listed were the Progressive, the Iowa Silent, the

Durrell-Sullivan, the Cooperative, and the Gates. Other tests mentioned several times were: the California, the Detroit, the Unit Scales of Attainment, the Nelson-Denny, and the Wide Range. Several clinics gave a variety of reading readiness tests as a part of the diagnosis of reading difficulties. Approximately sixteen per cent of the clinics omitted the administration of a standardized reading achievement test. Durrell's Reading Capacity and Analysis of Reading Difficulty were mentioned by nine per cent of the centers. Three per cent of the clinics mentioned diagnostic reading tests without giving specific titles. Gray's Oral Reading Paragraphs were used by twenty-four per cent of the clinics. In other centers supplementary information was obtained through the same procedures found by Kopel and Geerdes (1944).

Bond and Botel (1952) found that oral reading and silent reading tests were two of the most frequently used tests in making a diagnosis in the reading clinics studied by them. Adams (1958) found that reading tests, both formal and informal, were considered of primary importance to the diagnostic programs of the clinics studied. All the centers used informal reading inventories and testing. The Gates Reading Tests, Gray's Oral Reading Paragraphs, the Cooperative English Test, and the Iowa Silent Reading Test were the formal instruments most commonly used at the centers. Gray's Oral Reading Paragraphs, the Cooperative English Test, and the Iowa Silent Reading Test were used at

thirty per cent of the centers. There was great variation among the centers in regard to the use of a dozen additional standard tests. Gray (1968) reported that oral reading tests were administered in approximately eighty-nine per cent of the clinics, and that a phonics test was administered in approximately seventy-three per cent of the clinics studied.

Tests of other educational achievement. Since many clinics diagnose reading disability partially in terms of the disparity between performance in reading and in other subjects, they examined school marks and administered general achievement tests. Kopel and Geerdes (1944) found that practically all of the well-known batteries were mentioned in their study. They also found that separate arithmetic and spelling tests were employed in many centers. Adams (1958) found that there did not appear to be any common agreement on the use of any tests of subject matter.

Clinic Clientele

Kopel and Geerdes (1942) found that clinics reported more reading disability cases were treated from the primary grades than from any other school level. A small percentage of their cases came from the upper elementary grades; a small proportion came from the high school. The most important source of referrals was the school, which was mentioned by nearly every clinic. Important, too, as referral sources were parents and social agencies; both

were listed by nearly every clinic which did not obtain its clientele from a single source such as the school. Mentioned several times but contributing relatively few cases were the following sources: self, clinic staff members, physicians, college professors, deans, student advisers, and examiners. Eighty-six per cent of the clinics reported that few or none of the children referred as reading problems were free from any reading difficulty. The remaining fourteen per cent of the clinics reported erroneous referral of reading cases in from ten to thirty per cent of the cases.

Boyd and Schwiering (1950) reported that almost half of the clinics diagnosed all types of school problems including reading disability cases. Approximately six per cent of the centers stated that they accepted all types of problems for diagnosis. Approximately eleven per cent of the clinics limited their diagnosis to behavior problems. Twelve per cent of the centers examined children with questionable mentality or special disability. Five per cent of the clinics studied severe childhood psychoses and neuroses to discover causes and recommended remediation. One center took all referrals but transferred to other agencies problems of child placement, relief, and adult delinquency, and then diagnosed the others. Approximately nine per cent mentioned academic or subject-matter problems and twenty-one per cent mentioned one of the following: emotional, behavior, or personality problems. Over

one-third of the cases were found to be in the primary grades. High school pupils were examined in about half of the clinics, but they represented only about two per cent of the total distribution. Teachers, principals, and social workers referred the greatest number of cases to the clinics. Parents were a source of referral in nearly half of the clinics. In only about a fifth of the clinics did social agencies and physicians recommend cases.

Gray (1968) reported that there was a trend toward establishment of clinics that admitted clients without limitations and, therefore, offered multiple services. Sixty-six per cent of the clinics reported in the study that they had unlimited enrollment. These clinics were established in the period of the past twelve years. This report showed that there had been a decided increase in the number of clinics established for college students only. The respondents in Gray's study indicated that clinics had a major interest in diagnosing the problems of children since eighty per cent indicated it was an original objective and eighty-four per cent indicated it was a present objective.

Programs of Remediation

Kopel and Geerdes (1944) found that eighty per cent of the clinics provided some degree of treatment for their cases while about twenty per cent confined their efforts to diagnosis and recommendations. The extent and nature of this remedial endeavor varied considerably. However,

remedial plans commonly involved one or more of the following administrative approaches: individual tutoring, small-group instruction, or summer reading classes. Each clinic was asked whether it employed a specific system of teaching reading or remedial reading. A large majority of the clinics, seventy-two per cent, answered this question negatively reflecting their eclectic practice. Eight per cent replied that they used only one system. Twenty per cent of the sample reported using two or more, or a combination of several procedures. Clinics were asked to state the fundamental principles underlying their remedial work. The answers showed a wide acceptance of the view that the method of remediation was adapted to the individual's needs.

Kopel and Geerdes (1944) found that the great majority of clinics reported the frequent association of many physical and behavioral problems with poor reading. Treatment of these allied problems was often found to be a phase of the total program of remediation and rehabilitation. It was found that methods of treatment approved by clinics varied considerably. However, certain procedures such as the application of accepted principles of psychotherapy supplemented by the correction of physical defects through medical treatment, recurred in the reports. Not all clinics provided treatment. Some, lacking needed facilities and personnel, referred their cases to other agencies in the community.

Boyd and Schwiering (1951) reported that forty-eight per cent of clinics affiliated with institutions of higher learning gave individual and group instruction; thirty-five per cent provided individual help only. More than half the clinics made no provision for psychiatric treatment. Among those who did have such facilities, fourteen per cent emphasized play therapy and thirteen per cent discussion therapy. These centers felt that play therapy was quite useful for diagnosing problems related to emotional or personality difficulties. Discussion therapy was used in working with parents and other adults in solving many problems. Fifty per cent of the clinics made provisions for psychiatric treatment. Of this number, fifteen per cent had no facilities within their own clinics but had affiliated agencies for referral of cases. Adams (1958) and Gray (1968) reported that although college and university reading clinics utilized one or more of the following administrative approaches, individualized tutoring, small group instruction, or summer reading classes, much variation was found in the emphasis placed upon the approaches by the colleges and universities.

Kopel and Geerdes (1944), Adams (1958), and Gray (1968) reported much disagreement in the approaches to remediation utilized by college and university reading clinics. Bond and Botel (1952), however, in their survey of ten eastern reading clinics found general agreement in that the basal reader approach was used by most of the clinics surveyed.

The eclectic approach and the individual determination of the approach based upon a diagnosis were both widely accepted by the clinics surveyed by Kopel and Geerdes (1944). Other approaches utilized to a lesser degree but in varying amounts by the clinics were the teaching of sight words, phonics emphasis, the kinesthetic-tactile approach, and the combination of two or more approaches. Adams (1958) found wide variations in the approaches to remediation and the materials utilized in remedial programs. He found that the materials utilized to the greatest extent by the majority of the clinics were teacher developed materials supplemented by the basal reader, and followed in popularity by high interest-low vocabulary books and reading films. The kinesthetic-tactile approach was utilized in varying degrees by ninety per cent of the clinics. Gray (1968) in his study found that the emphasis was placed upon skill development, followed in popularity by the use of commercially prepared material, the basing of the selection of the method and the materials upon the individual needs revealed by diagnosis, and the eclectic approach. However, wide variations were noted in methods and in materials utilized.

Case Study Approach

Kopel and Geerdes (1944) reported that in general the more adequately staffed clinics followed some type of case-study method which entailed the collation of data concerning

the individual's mental, physical, social, emotional, and educational development. This information was obtained through interviews with parents, teachers, and subject and data concerning the individual's present status in the several areas of development was obtained through the use of various standardized and informal tests, scales, and questionnaires; and through observation of the individual's attitudes, approach to reading and other tasks, and general reactions during the testing period.

Gates, Jersild, McConnell, and Challman (1948) reported that the case study was the most comprehensive of all methods of special inquiry. Barr, Davis, and Johnson (1953) reported that the case study was potentially the most valuable method known for obtaining a true and comprehensive picture of the individual, that it made possible a synthesis of many different types of data, and that it might include the effects of many elusive personal factors in drawing educational inferences. They further stated that it sought to reveal process and the interrelationships among factors that conditioned these processes.

Barr, Davis, and Johnson (1953) suggested that in conducting a case study the following steps were generally followed: (1) the establishment of the fact that the individual under investigation is inadequate in some vital respect, (2) the selection of a supposed cause or causes from among the circumstances leading to or accompanying the observed inadequacy, (3) the institution of a remedial,

corrective, or improvement program, and (4) rechecks to determine adequacy of behavior, performance, or output.

Adams (1958) reported that the clinicians surveyed by him stated that the case study approach established objectivity and systematization in working with individuals who were reading disability cases. He found that the case studies done by the various clinicians had major items or categories in common, but that they differed to some degree in the extent to which they sought specific information.

According to Putnam (1962) the following areas should be included in a comprehensive reading case study: (1) facts known, (2) areas needing more information, (3) sources of additional information, (4) possible inferences relating to the causes of disability, (5) student strengths including physical, social, emotional, academic factors, and reading skills, (6) student weaknesses including physical, social, emotional academic factors, and reading skills, (7) other relevant factors including home and school situation, self-image and self-assessment, (8) tentative diagnosis of causes, (9) prognosis, (10) necessary referrals, (11) immediate plans for the next session including goals, methods, procedures, and materials, and (12) ultimate plans.

Summary

The review of the literature disclosed similarities and differences in the diagnostic and remediation practices of university and college reading clinics. In regard to

qualifications of directors, it was found that the majority of the university and college reading clinic directors held the doctorate degree. Diversity was noted in qualifications of other members of the clinic staff, however, and in the number of kinds of specialists in allied areas used by the clinics. Also, diversity was found in the referral of cases to specialists not directly assigned to the reading clinics. It was further noted that the size of the staff and the availability of specialists for referral appeared to be determining factors in the comprehensiveness of the diagnosis of the reading disability case.

The literature revealed wide variations in testing procedures and in the testing instruments used by university and college reading clinics. Although the areas of vision and hearing, other perceptual and motor abilities, laterality, speech, general health, mental status, emotional adjustment, vocational and special aptitudes, reading, and other educational achievements were considered in the testing programs of many of the university and college reading clinics studied, wide variations were noted in regard to testing procedures and testing instruments used in testing these areas.

Studies showed that, although secondary, college and adult age groups were diagnosed and treated at many of the reading clinics; the elementary group, and more specifically the primary age child, was predominant as far as emphasis on an age level was concerned. The school was the

main source of referral. A trend was noted toward admitting clients without limitation.

Methods of remediation varied widely from clinic to clinic in most of the reports. The basal reader approach was predominate in the findings of one study, and the eclectic approach was used extensively by many of the clinics reporting in another study. It appeared that few of the reporting clinics based the method of remediation upon the findings of the diagnosis.

The case study approach was used extensively by most clinics. It was reported that this approach was of value for obtaining a comprehensive picture of the reading disability case, and that it established objectivity and systemation for working with the reading disability case.

The review of the literature revealed that diagnostic procedures and methods of remediation have not yet been agreed upon by all clinical workers. Furthermore, it was found that the interpretations of findings have sometimes been influenced by the speciality or the special interest of the examiners. The lack of agreement found in the literature in regard to the diagnosis and remediation of the reading disability case pointed to the need for further investigation concerning the diagnosis and treatment of the reading disability case in college and university reading clinics.

CHAPTER III

METHODOLOGY OF THE STUDY

Introduction

The purpose of this study was to determine the areas of agreement in regard to test interpretation, diagnosis, prognosis, and remediation practices of college and university reading clinics. To accomplish this purpose a single reading disability case was selected by the investigator and submitted to a random sample of clinicians in college and university reading clinics. The clinicians separately prepared a case study which was analyzed.

Selection of the Sample for the Study

Franklin's (1969) survey of diagnostic procedures in university and college reading clinics provided the sample for this study. The following procedures were followed by Franklin (1969): A 1969 edition of The Education Directory, Part 3, Higher Education, was used to obtain a list of institutions of higher education. All institutions classified as offering a master's degree, the doctor's degree, or their equivalents were selected as the sample. This amounted to a total of 741 institutions. The scope of the sample included every state in the United States.

A questionnaire asking for information relative to clinical procedures was sent to each of the 741 institutions. Two hundred ninety-two returns were received. This represented a 39.4 per cent return on the questionnaire. One hundred ninety-three returned questionnaires were rejected on the basis of the respondent's submitting a negative answer to the existence of a reading clinic. A total of ninety-nine questionnaires out of the 292 returned were accepted for analysis.

Each of the ninety-nine clinic directors whose questionnaire was accepted for analysis by Franklin was mailed a letter requesting his cooperation to participate in this study. Returns were received from ninety or 91 per cent of the clinic directors. Fifty-one or 56 per cent of the 90 university and college reading clinic directors expressed a willingness to participate in the study. Thirty of the fifty-one clinics were selected at random for the study. Each of the thirty clinic directors was asked to make a written report of the reading disability case provided by the investigator.

A letter was mailed to each of the thirty clinic directors informing him that his reading clinic had been selected to make a case report of a reading disability case. All thirty clinic directors responded expressing their willingness to participate. The diagnostic instruments requested by the clinicians were administered, scored, and returned to the clinic directors. In some instances of

infrequently used tests, the clinicians were asked to supply them. Audio tapes were made available to those clinicians requesting them. Case studies were received from twenty-seven or ninety per cent of the clinic directors.

These twenty-seven reading clinics represented colleges and universities with enrollments which ranged from less than 2,000 students to more than 37,000 students. Specifically, there were six institutions with enrollments of less than 5,000, ten with enrollments ranging from 5,001 to 10,000 students, two with enrollments ranging from 10,001 to 15,000 students, three with enrollments ranging from 15,001 to 20,000 students, two with enrollments ranging from 20,001 to 25,000 students, one with an enrollment in the 25,001 to 30,000 range, one with an enrollment in the 30,001 to 35,000 range, and two with enrollments ranging from 35,001 to 40,000 students.

The following types of institutions were represented in the returns:

Liberal arts and general teacher preparatory, 10

Liberal arts and general teacher preparatory and professional, 6

Occupational-technical/semi-professional liberal arts and general teacher preparatory and professional, 5

Occupational-craftsmen/clerical occupational/technical/semi-professional liberal arts and general teacher preparatory, 4

Liberal arts and general, 1

Occupational-technical/semi-professional liberal arts and general teacher preparatory, 1

The highest degree offered by these institutions were as follows: doctorate, 11; beyond masters but less than doctorate, 6; and masters, 10.

The twenty-seven institutions represented in the study were in the following locations: Midwestern States, 11 institutions; Pacific Coast States, 5; Middle Atlantic States, 5; Southern States, 4; and Southwestern States, 2.

On the basis of these facts it would appear that there was no particular bias in the representation of the institutions.

Preparation of the Case

A reading disability case who had been diagnosed by the investigator was selected to serve as the subject of the case study. The child selected for the study was a thirteen year old boy. According to the Gates-McGinitie Reading Test, Primary B, Form 1, his reading achievement grade equivalents were: vocabulary, 2.2; comprehension, 2.2. Intelligence quotient scores, according to the Wechsler Intelligence Scale for Children, were: verbal scale, 99; performance scale, 101; and full scale, 100. The reading achievement scores, the IQ scores, and a referral blank for educational diagnosis (Appendix A) completed by the child's mother were mailed to the clinic directors who had consented to participate in the study

and who were included in the random sample. The referral blank for educational diagnosis included general background information, developmental and medical history, family and home situation, school adjustment, and behavioral characteristics concerning the subject. The reading clinicians were asked to request any additional data which they believed necessary to complete a case study for this child.

Procedures in Analyzing Data

An analysis was made of each of the case studies prepared by the clinician in a college or university reading clinic in an attempt to answer questions concerning agreement found in test interpretation, diagnosis, prognosis, and remediation. The findings were then discussed in regard to this agreement in test interpretation, diagnosis, prognosis, and remedial direction when identical tests were administered and when different tests were administered.

Summary

The purpose of this study was to determine areas of agreement in regard to test interpretation, diagnosis, prognosis, and remediation practices of college and university reading clinics. A reading disability case was selected by the investigator. Basic information concerning this case was supplied to the college and university reading clinicians who had agreed to participate in this study

and who had been randomly selected. Each clinician then wrote a case study utilizing this original information and any additional data requested by him. The investigator made a content analysis of each case study in regard to agreement in test interpretation, diagnosis, prognosis, and remedial direction.

CHAPTER IV

FINDINGS OF THE STUDY

The purpose of this chapter was to present a detailed description of the findings concerning the analysis of the case studies reported by the twenty-seven college and university clinicians. The description of the findings dealt specifically with the seven questions posed in Chapter I. These questions were:

1. Was there agreement in test interpretation?
2. Was there agreement in diagnosis when identical tests were administered?
3. Was there agreement in diagnosis when different tests were administered?
4. Was there agreement in prognosis when identical tests were administered?
5. Was there agreement in prognosis when different tests were administered?
6. Was there agreement in remedial direction when identical tests were administered?
7. Was there agreement in remedial direction when different tests were administered?

Since this study was concerned with determining agreement in test interpretation, diagnosis, prognosis, and recommendations for remedial direction of a reading disability, the findings of the study were reported under the following four main headings: (1) agreement in test

interpretation, (2) agreement in diagnosis, (3) agreement in prognosis, and (4) agreement in remedial direction. The term, agreement, was used when all of the clinicians offering an interpretation, diagnosis, prognosis, or recommendation for remedial direction agreed, much agreement was the term used when seventy-five per cent or more but less than all of the clinicians agreed, some agreement was the term used when fifty per cent or more but less than seventy-five per cent of the clinicians agreed, little agreement was the term used when twenty-five per cent or more but less than fifty per cent of the clinicians agreed, and very little agreement was the term used when less than twenty-five per cent of the clinicians agreed. Disagreement was the term used when there was a total lack of agreement.

Agreement in Test Interpretation

Agreement in test interpretation was discussed under the following headings: (1) vision and audition, (2) perceptual and motor abilities, (3) laterality, (4) general health, (5) mental status, (6) emotional adjustment, (7) reading tests, and (8) general educational tests. The tests which were requested in all of the areas are given in Tables I through V.

Vision and Audition (Table I)

The Keystone Visual Survey Test was requested by

thirteen clinicians. Agreement was found in the interpretations of all the clinicians who considered the test in that all of them classified the subject's vision as normal.

The Beltone Audiometer Test was requested by eleven clinicians. Much agreement was found in the interpretations of the clinicians requesting this test. All of the clinicians agreed that the subject was within the normal range for all frequencies in the right ear. However, nine of the eleven clinicians found the hearing acuity of the left ear to be normal while two of the clinicians interpreted the subject as having a deficiency in hearing acuity of the left ear. One of these two clinicians stated that the results of the test indicated a present and possible chronic handicap, and one clinician stated that the results of the tests showed a definite handicap with the possibility of a progressive hearing loss of the left ear. Although much agreement was found in the interpretations of the test, the interpretations could result in extreme divergence in the diagnosis, prognosis, and recommendations for remedial direction for the subject. For example, the interpretation of a severe hearing disability might result in the identification of a basic problem of auditory acuity, auditory memory, and/or auditory discrimination. This could further lead to a recommendation that the subject be taught by the visual-auditory method, while at the same time recommendations might be made to train the subject to compensate for this disability. It is highly

possible in a situation such as this that the subject's most efficient mode of learning would be through the auditory channel. Therefore, it is highly possible that an error in test interpretation could result in a severe loss of learning efficiency for the subject.

The Wepman Auditory Discrimination Test was requested by seven clinicians. Agreement was found in the interpretations of all the clinicians who considered the test in that all of them classified the subject's auditory discrimination as inadequate.

Perceptual and Motor Abilities (Table I)

Ten clinicians requested the administration of the Bender Visual Motor Gestalt Test. Much agreement was found in the interpretations of the clinicians requesting this test. Eight clinicians interpreted the results of the test as showing no visual motor problems or perceptual difficulty, and two clinicians interpreted the test results as indicating a visual motor problem. One of these two clinicians stated that the subject displayed a slight inadequacy, and the other clinician stated that the subject displayed a definite visual motor problem. Here again, although much agreement was found in the interpretations of the clinicians requesting the test, the interpretations of the test could result in serious errors in the subsequent diagnosis, prognosis, and recommendations for remedial direction for the subject.

The Draw-A-House-Tree-Person Test was requested by five clinicians. Interpretations of the test were offered by two of the five clinicians in regard to perceptual and motor abilities. Disagreement was found in the interpretations of these two clinicians. One stated that the test results revealed poor fine motor skills and poor body concepts, and one stated that a general learning disability was indicated. Since the clinician who stated that a general learning disability was indicated further recommended that the subject be placed in a learning disabilities class, disagreement of the interpretation of this test could result in divergent programs of remediation for the subject.

Six clinicians requested the administration of the Illinois Test of Psycholinguistic Abilities. Four of these clinicians offered an interpretation of the test results. Disagreement was found from the standpoint of identical interpretations being offered by these four clinicians. Although certain points of interpretation were the same, no two complete interpretations were identical. One stated that the results revealed inadequate auditory memory; one stated that in addition to the results revealing inadequate auditory memory, the inability to recognize oral words with missing parts was indicated; one stated that visual memory and visual motor difficulties were indicated; and one stated that the results showed inadequate visual memory for relatively meaningless symbols, inadequate language usage,

and an inability to recognize oral words with missing parts. The seriousness of this disagreement may be visualized by considering the tying in of this interpretation of the auditory problem to that of the auditory difficulty detected by the two clinicians offering interpretations of an auditory deficiency as found in the Beltone Audiometer Test. This might lead to confirmation on the part of the clinicians that the subject did have an auditory problem. Therefore, the identification of the basic problem, the prognosis offered, and the recommendations for remedial direction might be in error when based upon inaccurate test interpretation.

Laterality (Table I)

The Harris Test of Lateral Dominance was requested by four clinicians. Three of the clinicians offered interpretations of the test. Agreement was found in that the three clinicians indicated the subject had strong right dominance in hand, eye, and foot.

Mental Status (Table II)

Two reading clinicians requested the administration of the Goodenough Harris Drawing Test. One clinician approached the interpretation of the test from the standpoint of intellectual maturity and the other clinician offered interpretation in regard to personality development. Average to above average intellectual maturity was

the interpretation of one clinician. The second clinician stated that the test revealed anxiety.

The subtest scores of the Wechsler Intelligence Scale for Children were requested by eight clinicians. Three of these clinicians offered no interpretation. Some agreement was found in the interpretations of the five clinicians who offered interpretation of the test. Three clinicians stated that the test results revealed weaknesses in perceptual speed and visual memory, one clinician stated that the test indicated auditory memory and sequencing difficulties, and one clinician stated that the test results indicated difficulties in the ability of the subject to handle low level anxiety. Although there was some agreement in the interpretations, the divergence of the interpretations would appear to pose a definite threat to the subsequent diagnosis, prognosis, and recommendations for remedial direction for the subject.

Emotional Adjustment (Table II)

Tests of emotional adjustment requested by more than one clinician were the Thematic Apperception Test, the Bender Visual Motor Gestalt Test, and the Draw-A-House-Tree-Person Test. Of the four clinicians who requested the Thematic Apperception Test, only one offered an interpretation. Ten clinicians requested the test results of the Bender Visual Motor Gestalt Test. Four of these ten clinicians offered an interpretation of this test in regard

to the subject's emotional adjustment. Agreement was found in the interpretations of these four clinicians in that all four of the clinicians stated that the results of the test revealed definite emotional problems. The Draw-A-House-Tree-Person Test was requested by five clinicians. Three of these clinicians offered interpretations of the test in regard to an emotional problem. Some agreement was found in the interpretations of these three clinicians. Two clinicians stated that the tests revealed the subject was severely emotionally depressed and one clinician stated that the results indicated a definite need to further evaluate the mother-child relationship. Although some agreement was found in the interpretations of this test, the severity of the test results should have resulted in more agreement in regard to the presence of an emotional problem.

Reading Tests (Tables III, IV, and V)

More than one clinician offered interpretations of the following reading tests: Diagnostic Reading Scales, Dolch Basic Word List, the Durrell Analysis of Reading Difficulty, and the Gray Oral Paragraphs.

The Diagnostic Reading Scales was requested by seven clinicians. Little agreement was found in the interpretations of the test. Two clinicians stated that comprehension was high. The following observations were made by clinicians: repetitions observed by one; omissions of

TABLE IV

SUBTESTS OF THE DURRELL ANALYSIS OF READING DIFFICULTY
REQUESTED BY PARTICIPATING CLINICS

Name of Subtests	Clinic Code Number										Total	
	1	2	3	6	11	15	17	20	21	23		27
Reading, Oral	X	X	X		X	X		X		X	X	8
Reading, Silent	X	X	X		X	X		X		X	X	8
Listening	X	X	X		X			X	X	X	X	8
Flash	X	X	X		X	X		X		X	X	8
Word Analysis	X	X	X		X	X		X		X	X	8
Visual Memory of Words (Primary)	X	X	X		X	X		X		X	X	8
Hearing Sounds (Primary)	X	X	X	X	X			X		X	X	8
Phonic Spelling of Words	X	X	X		X	X	X	X		X		8
Spelling Test	X	X	X		X			X		X	X	7

TABLE V

SUBTESTS OF GATES-McKILLOP READING DIAGNOSTIC TESTS
REQUESTED BY PARTICIPATING CLINICS

Name of Subtest	Clinic Code Number			Total
	6	15	27	
I. Oral Reading		X	X	2
II. Words: Flash Presentation	X		X	2
III. Words: Untimed Presentation	X		X	2
IV. Phrases: Flash Presentation	X	X	X	3
V-1 Recognizing and Blending Common Word Parts	X	X	X	3
V-2 Giving Letter Sounds			X	1
V-3 Naming Capital Letters			X	1
V-4 Naming Lower Case Letters			X	1
VI-1 Nonsense Words	X	X	X	3
VI-2 Initial Letters			X	1
VI-3 Final Letters			X	1
VI-4 Vowels			X	1
VII-1 Spelling			X	1
VII-2 Oral Vocabulary			X	1
VII-3 Syllabication			X	1
VII-4 Auditory Discrimination		X	X	2

common words, one; omissions of word endings, one; aided words, one; substitutions, two; does not use context clues, one; and slow rate of reading, two. Since information such as this is basic to accurate recommendations for remedial direction, the lack of agreement shown poses a serious problem.

Seven clinicians requested the administration of the Dolch Basic Word List. Four of these clinicians made no mention of the test in the case study; three listed the score, one hundred and sixteen correct out of a possible two hundred and twenty words. Of these three who listed the score, two clinicians gave their interpretations of the test results. Disagreement was found from the standpoint of identical interpretations being offered by these two clinicians. Although certain points of interpretations were the same, the two complete interpretations were not identical. The two clinicians agreed that a predominance of errors was made in initial sounds. One observed that in addition to a predominance of errors in initial sounds, there was an excessive amount of errors in final sounds; there was a number of substitutions of words of similar configuration, reversals (b and d), reversal of word parts, and the inability of the subject to pronounce words with ou, au, ow and ay. The other clinician observed that in addition to a predominance of initial errors, the subject displayed a tendency to spell difficult words orally, and, in summary, that he demonstrated a severely inadequate

sight vocabulary. The disagreement in interpretation here could result in the selection of different methods by the two clinicians.

Eleven clinicians requested the administration of Durrell Analysis of Reading Difficulty. The oral subtest of the Durrell Analysis of Reading Difficulty was interpreted by eight clinicians. Of the eight, three did not list a score for oral reading. Very little agreement was found in the assigning of an oral reading score. One stated that the subject did not score; one designated low first grade as the score; one listed the score as 1.0; one listed 1.5; and one listed approximately 2.5. A range of 1.5 grade levels represents a tremendous discrepancy in interpretation, especially at the early primary grade level. If an error of this magnitude occurred in the selection of a starting point for the subject, serious complications could result. An analysis of the interpretations of the subtest indicated some agreement. Four of the clinicians made mention that comprehension was good. Five of the clinicians mentioned that poor phrasing was a problem. Errors on easy words were mentioned by three clinicians. Omissions were listed as a problem for the subject by two clinicians while one clinician mentioned that omissions were not a problem. A problem of repetitions was listed by two clinicians while one clinician specifically stated that there was not a problem of repetitions. Lack of expression was listed as a problem by two

clinicians. Oral reading rate was mentioned as a problem by four clinicians.

Eight clinicians interpreted the silent reading subtest of the Durrell Analysis of Reading Difficulty. Of the eight, two clinicians did not designate a silent reading score. Little agreement was found in the assigning of a silent reading score. One stated that the subject could not score; one designated the score as 1.0; two designated the score as low first grade; one stated as 1.5; and one listed as 3.0. Since the success of a plan of remediation is dependent, to a great extent, on the correct starting point as far as reading level is concerned, a range of obtained scores of two grades should be carefully considered. Analysis of the interpretations of the clinicians revealed little agreement to much agreement. Slow reading rate was designated as a problem by four clinicians. Three clinicians mentioned lip movements as a problem. Whispering was mentioned by two of the clinicians. Imagery was listed as good by three clinicians. Comprehension was listed as adequate by six clinicians.

Eight clinicians offered interpretation of the flash words subtest of the Durrell Analysis of Reading Difficulty. Little agreement was found in the assigning of a score for this subtest. Of the eight, one listed the grade score as approximately 2.5; one as 2.8; one as 2.9. Three listed separate grade scores for the two lists which were administered to the subject--list one, high first; list two,

high second. One stated that no score was made; and one did not list a score but stated that 22 of the 40 words on grade one list were recognized correctly, and that on the grades two through six list, the subject named eight of the fifty words when they were flashed to him.

The word analysis subtest of the Durrell Analysis of Reading Difficulty was interpreted by eight clinicians. Little agreement was found in the assigning of a score to this subtest. Of the eight, one mentioned that the subject did not score; one stated that the subject scored approximately 2.5, two stated 2.8. One mentioned level one as high first and the second list as middle second; two clinicians mentioned level one as high first, and the second list as high second; and one clinician did not state a score.

Eight clinicians interpreted the Visual Memory of Words subtest of the Durrell Analysis of Reading Difficulty. Little agreement was found in the assigning of a score to the subtest. One clinician stated that the subject did not score on this subtest; one stated that he was very low; three listed the level as 2.5; two as 2.5+; and one as 2.8.

The Hearing Sounds in Words subtest of the Durrell Analysis of Reading Difficulty was interpreted by eight clinicians. Little agreement was found in the assigning of a score to this subtest. One stated that the subject did not score; one mentioned that the data suggested that he performed visual tasks more efficiently than auditory

tasks; one listed 2.6; one designated low third grade; one indicated 3.0-3.5; one listed 3.2, and two listed the number correct: 26/29.

Eight clinicians interpreted the Phonic Spelling of Words subtest of the Durrell Analysis of Reading Difficulty. Three of these made no mention of the subtest in the case study. Little agreement was found in the assigning of a score to this subtest. One clinician listed two correct responses out of a possible 15, two listed one correct response out of a possible 15, one stated that the results were very poor, and one clinician reported that no score was obtained.

The Spelling subtest of the Durrell Analysis of Reading Difficulty was requested by seven clinicians. Three clinicians did not relate to an equivalent grade level but listed the number correct as being five out of a possible twenty. Very little agreement was found in the assigning of a score to this subtest. One stated that no score was obtained; one stated that the results were very poor; one listed a grade equivalent as 1.2; and one listed 1.5.

Seven clinicians requested the administration of the Gray Oral Reading Test. Little agreement was found in the assigning of a score to this subtest. The following observations were noted: 1.7 grade equivalent by two clinicians; upper first grade level, one; primer, one; severe reading lag, one; no grade equivalent, two. Little agreement was revealed by the analysis of the interpreta-

tion of the clinicians. Observations made by the clinicians included: lacks phrasing, three; lacks expression, two; is overly analytical, one; attempts to vocalize parts of difficult words, one; shows signs of tensions, one; and displays very low rate of reading, one.

General Educational Tests

The Wide Range Achievement Test was requested by three clinicians. The purpose of the test was to explore achievement and abilities in the areas of reading, spelling, and arithmetic. Agreement was found in the interpretations of reading and spelling. However, disagreement was found in the interpretations of two clinicians in the subtest arithmetic in that one clinician stated that the subject was capable of working problems involving the four fundamental processes of arithmetic (addition, subtraction, multiplication, and division) while another clinician stated that the subject had not accomplished the ability to work the fundamental process of division.

Agreement, much agreement, some agreement, little agreement, very little agreement, and disagreement were found in the test interpretations made by the clinicians in the college and university reading clinics. Agreement was found in the interpretations of the Keystone Visual Survey Test, the Wepman Auditory Discrimination Test, the Harris Test of Lateral Dominance, and the interpretations from the standpoint of emotional adjustment of the Bender

Visual Motor Gestalt Test. Much agreement was found in the interpretations of the Beltone Audiometer Test and the interpretations from the standpoint of perceptual and motor abilities of the Bender Visual Motor Gestalt Test. Some agreement was found in the interpretations of the subtest scores of the Wechsler Intelligence Scale for Children, the interpretations from the standpoint of emotional adjustment of the Draw-A-House-Tree-Person Test, and the interpretations of the oral reading subtest of the Durrell Analysis of Reading Difficulty. Little agreement was found in the interpretations of the Gray Oral Reading Test, Diagnostic Reading Scales, and the subtest scores, silent reading, flash words, word analysis, visual memory of words, hearing sounds in words, and phonic spelling, of the Durrell Analysis of Reading Difficulty. Very little agreement was found in the subtest scores, oral reading and spelling, Durrell Analysis of Reading Difficulty. Disagreement was found in the interpretations of the Draw-A-House-Tree-Person Test in reference to perceptual and motor abilities, Illinois Test of Psycholinguistic Abilities, Goodenough Harris Drawing Test, and the Dolch Basic Word List.

Agreement in Diagnosis

Problems identified in regard to the diagnosis of the reading disability were word attack problem, emotional problem, auditory problem, lack of school experience,

visual memory problem, and social problem. (Table VI) These problems were discussed in relation to agreement in tests requested by the clinicians who identified the basic problems of diagnosis. However, in most cases the tests were not stated as evidence to support the existence of the problem.

Twenty-five clinicians identified one problem as being a deficiency in word attack skills. Specifically, when one or more of eighteen different tests were requested by separate clinicians, there was agreement among the clinicians that the problem existed. The reader should not infer that this means the deficiency was necessarily detected by a particular test, but when a test was requested, this kind of agreement occurred. When one or more of four other tests were requested by clinicians, some agreement was found among the clinicians in that a problem of word attack was identified.

Fourteen clinicians noted the presence of an emotional problem. All of the clinicians who requested one or more of seven specific tests identified the difficulty as an emotional problem. For example, all of the clinicians who requested the Thematic Apperception Test perceived the subject as having this problem. Much agreement was found in the identification of a basic problem of emotional adjustment and the requests for the Bender Visual Motor Gestalt Test for Children and/or the Draw-A-House-Tree-Person-Test.

TABLE VI

DIAGNOSIS AND PROGNOSIS IDENTIFIED BY PARTICIPATING CLINICS

Diagnosis and Prognosis	Clinic Code Number																											T
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
Diagnosis:																												
Basic Problem																												
Word Attack	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	25
Emotional	X	X	X	X	X			X	X					X		X			X		X	X		X	X	X	X	14
Auditory		X			X	X									X				X			X			X	X		9
Lack of School Experience		X			X				X		X						X								X			6
Visual Memory		X	X															X				X						4
Social		X									X						X				X							4
Prognosis:																												
Potentially Seventh Grade Level	X		X			X	X					X			X		X	X										8
Potentially Less than Seventh Grade Level		X		X																			X	X		X	X	6
Guarded Because of Educational Deprivation					X						X																	2
Dependent Upon an Improved Self-Image									X																			1
Guarded Because of Subject's Age and Severity of Test Results																						X						1

Nine of the clinicians diagnosed the reading disability as including an auditory problem. Much agreement was found among those clinicians who requested the Wepman Auditory Discrimination Test and who subsequently identified an auditory problem. Some agreement was found among those clinicians who requested the Beltone Audiometer Test and identified an auditory problem. However, little agreement was found among those clinicians who requested the subtest Hearing Sounds in Words, Durrell Analysis of Reading Difficulty and who identified an auditory problem. None of those clinicians who requested subtest VII-4, Auditory Discrimination, Gates-McKillop Reading Diagnostic Tests identified an auditory problem.

Six clinicians diagnosed the reading disability as including a problem of lack of school experience. Three of these clinicians requested the school background of the subject, and two of these three identified the lack of school experience problem. There was no clear indication as to the possible source of information utilized by the other clinicians.

Four of the clinicians diagnosed the reading disability as including a visual memory problem. Little agreement was found among those clinicians requesting the subtest Visual Memory of Words, Primary, Durrell Analysis of Reading Difficulty and/or the Visual Memory of Words, Intermediate, Durrell Analysis of Reading Difficulty and who identified a visual memory problem. None of the

clinicians requesting the subtest IV, Phrases: Flash Presentation, Gates-McKillop Reading Diagnostic Tests, diagnosed the reading disability as including a visual memory problem.

Four of the clinicians diagnosed the reading disability as including a social problem. Very little agreement to no agreement was found in the tests requested by these clinicians and the identification of the problem. For example, very little agreement existed between the perception of the problem and the clinicians' request of the Draw-A-House-Tree-Person Test. No clinician requesting the Thematic Apperception Test and/or the Bender Visual Motor Test for Children diagnosed the disability as including a social problem.

Problems identified in regard to the diagnosis of the reading disability were word attack problem, emotional problem, auditory problem, lack of school experience, visual memory problem, and social problem. The problems were discussed in regard to agreement in tests requested and the identification of the problem. In most instances the tests were not referred to as evidence that the identification of the problem was based upon the interpretation of a specific test. More agreement was found in the requests for tests and the subsequent identification of the problem as being a deficiency in word attack skills than for any other problem. Much agreement was found in the requests for tests and the identification of an

emotional problem. Little agreement to disagreement was found in the requests for tests and the identification of the other problems.

Agreement in Prognosis

Eighteen of the twenty-seven clinicians offered a prognosis. (Table VI) Some agreement was found in the prognosis of these eighteen clinicians. Twelve clinicians offered the prognosis that the subject had seventh grade potential; two stated that the subject's potential was less than seventh grade level; one stated that the prognosis was dependent upon an improved self-image; two stated that it was guarded because of educational deprivation; and one stated that the prognosis was guarded because of the subject's age and the severity of the test results. All of the clinicians were furnished the IQ scores of the Wechsler Intelligence Scale for Children as basic information.

Agreement in Remedial Direction

Twenty-one different recommendations were given by the twenty-seven reading clinicians. Three of these twenty-one recommendations dealt with the subject's environment. These three recommendations were: male teacher, counseling for the subject, and counseling for the subject's mother. Agreement was found in many of the requests for tests and the recommendations that the subject receive counseling and/or that he be taught by a male teacher. However, very

little agreement was found among the types of information requested and the recommendation of counseling for the subject's mother.

Recommendations for remedial direction were: language experience method, sight word development, context clues instruction, word attack skills instruction, visual-auditory-kinesthetic-tactile approach, linguistic method, programmed material, visual memory improvement, treatment of auditory memory difficulty, phrase reading instruction, perceptual training, impress approach, writing, phonics in context instruction, improvement in auditory discrimination, rate improvement, treatment for being over-analytical, and instruction in blending. (Table VII) These recommendations for remedial direction were discussed in relation to agreement in tests requested by the clinicians who made the recommendations. However, in most cases the tests were not stated as evidence for the recommendation of remedial direction.

Ten clinicians recommended that the subject be taught by the language experience method. Some agreement was found in the tests requested by these clinicians and the recommendation. For example, there was some agreement by those clinicians who requested the Listening Subtest of the Durrell Analysis of Reading Difficulty and who recommended the language experience method. However, other tests which indicated a basis for this recommendation were not related to the recommendation.

Ten of the clinicians recommended that the subject work on sight word development. Here again, little to no agreement was found in the tests requested by these clinicians and the recommendation. For example, little agreement was found between the recommendation and the clinicians' request for either the Dolch Basic Word List or the word recognition subtest of the Diagnostic Reading Scales. No clinician who requested the Botel Reading Inventory made the recommendation that the subject work on sight word development.

Seven clinicians recommended that the subject be taught to use context clues. There was some agreement found in the requests for the subtest Oral Reading, Durrell Analysis of Reading Difficulty, and the recommendation that the subject be taught to use context clues. However, very little agreement was found in the requests for the Diagnostic Reading Scales, and/or the Informal Reading Inventory and the recommendation that the subject be taught to use context clues.

Seven clinicians recommended that the subject be taught word attack skills. Very little agreement was found between the recommendation and the clinicians' request for the subtest, Word Analysis, Durrell Analysis of Reading Difficulty, and the Diagnostic Reading Scales.

Five of the clinicians recommended that the subject be taught by the visual-auditory-kinesthetic-tactile approach. Here again, little agreement was found between

the recommendation and the clinicians' request for such tests as the Dolch Basic Word List, Durrell Analysis of Reading Difficulty, Gray Oral Reading Paragraphs, and the Diagnostic Reading Scales.

Four of the clinicians recommended that the teaching be directed toward the improvement of visual memory. Little agreement to disagreement was found in the clinicians' request for the tests and the recommendation. For example, little agreement was found in the requests for the Dolch Basic Word List and the recommendation that the teaching be directed toward the improvement of visual memory. Very little agreement was found in the requests for the subtest scores of Wechsler Intelligence Scale for Children, and/or the subtest, Visual Memory of Words, Primary, Durrell Analysis of Reading Difficulty and the recommendation. Disagreement was found in the clinicians' requests for the subtest IV, Phrases: Flash Presentation, Gates-McKillop Reading Diagnostic Tests and the recommendation that the teaching be directed toward the improvement of visual memory.

Four of the clinicians recommended that the subject be treated for an auditory memory difficulty. Some agreement was found in the clinicians' request for the Illinois Test of Psycholinguistic Abilities and the recommendation that the subject be treated for an auditory memory difficulty. However, little agreement was found in the clinicians' request for the Wechsler Intelligence Scale for Children

and the recommendation.

Twenty-one different recommendations were given for remedial direction. Three of these twenty-one dealt with the subject's environment. Recommendations for remedial direction were language experience method, sight word development, instruction in context clues, instruction in word attack skills, visual-auditory-kinesthetic-tactile approach, linguistic method, programmed material, improvement in visual memory, treatment of auditory memory difficulty, instruction in phrase reading, perceptual training, impress approach, writing, instruction in phonics in context, improvement in auditory discrimination, rate improvement, treatment for being over-analytical, and instruction in blending.

Some agreement was found in the clinicians' requests for one test and the subsequent recommendation that the subject be taught by the language experience method. However, other tests which should have lead to this recommendation were not related to the recommendation. Little agreement to disagreement was found in the recommendation that sight word development be emphasized and the requests for tests which should have lead to this conclusion. Some agreement was found in the recommendation that the subject be taught to use context clues and a request for a specific test. However, very little agreement was found in other requests for tests and the recommendation. Very little agreement was found in the recommendations that

the subject be taught word attack skills and requests for specific tests which should be indicative of the need for this recommendation. Little agreement was found in the recommendation that the visual-auditory-kinesthetic-tactile approach be used and requests for tests. Little agreement to disagreement was found in requests for tests and the recommendation that training should be given the subject for the improvement of visual memory. There were no instances where there was much agreement in recommendations for remedial direction and tests for specific tests.

Summary

This chapter presented a description of the findings concerning the analysis of the case studies submitted by twenty-seven college and university reading clinics. The findings dealt with agreement in test interpretation, agreement in diagnosis, agreement in prognosis, and agreement in remedial direction.

Agreement, much agreement, some agreement, little agreement, very little agreement, and disagreement were found in the test interpretations made by the clinicians in the college and university reading clinics. However, there were many more instances of little agreement to disagreement than there were instances of some agreement to agreement. Also, it appeared that the instances of little agreement to disagreement were strategic points as far as test interpretation would influence a subsequent

diagnosis, prognosis, and recommendations for remedial direction.

Problems identified in regard to the diagnosis of the reading disability were word attack problem, emotional problem, auditory problem, lack of school experience, visual memory problem, and social problem. Agreement was found by those clinicians requesting one specific test and the identification of an emotional problem. There was also much agreement found in the requests for two other tests related to this problem and the identification of the problem. In the request for one test much agreement was found in that the clinicians requesting the test also identified an auditory problem. There was some agreement found in requests for one other test and the identification of the problem. However, two other tests which were specifically related to this problem resulted in little agreement in requests for the tests and the subsequent identification of the problem. There was some agreement in requests for tests and the identification that the basic problem was a lack of school experience. Little agreement to disagreement was found in the identification of two other basic problems and requests for related tests. Some agreement was found in the prognoses made by the clinicians and requests for tests. Very little, if any, agreement was found between the requests for tests and the recommendations made for remedial direction.

CHAPTER V

SUMMARY AND CONCLUSIONS

General Summary of the Investigation

This study investigated areas of agreement of college and university reading clinicians concerning test interpretation, diagnosis, prognosis, and recommendations for remedial direction of a reading disability. The study proceeded through an investigation of a case study prepared by each of twenty-seven college or university reading clinicians based upon the reading disability of a thirteen year old boy who was enrolled in the seventh grade of a junior high school.

The investigator supplied all of the data for the case study. A reading test and an individual intelligence test were administered to the subject, and these test scores were sent to the college or university reading clinicians participating in the study. To supplement these test scores, the reporting clinicians were free to request any additional information they felt necessary to complete the case study. The investigator supplied this information to the clinician who requested it. Each clinician then wrote a case study.

An analysis of the case studies prepared by the college and university clinicians was made in an attempt to answer the following questions:

1. Was there agreement in test interpretation?
2. Was there agreement in diagnosis when identical tests were administered?
3. Was there agreement in diagnosis when different tests were administered?
4. Was there agreement in prognosis when identical tests were administered?
5. Was there agreement in prognosis when different tests were administered?
6. Was there agreement in remedial direction when identical tests were administered?
7. Was there agreement in remedial direction when different tests were administered?

Conclusions

There was more disagreement than agreement in the interpretations of the tests requested by the twenty-seven clinicians. For example, interpretations based upon identical information supplied to the clinicians ranged from normal to a severe disability. Results of tests of emotional adjustment were interpreted as normal by some clinicians while others interpreted suicidal tendencies. Visual memory was suggested as a strength by some clinicians while others stated that this was a definite weakness. The same situation was found in the interpretations of the tests of auditory memory and auditory sequencing. Instructional levels recommended for the

subject on the basis of the interpretations of the results of the various reading tests ranged from preprimer to the third grade level. Reading expectancy ranged from grade four to grade seven. Therefore, in answer to question one, there were many more instances of little agreement to disagreement than there were instances of some agreement to agreement. However, the seriousness of the extremely divergent interpretations offered in many of the instances of disagreement poses a threat to subsequent steps in the diagnosis of the subject. The consequences could include matters of school placement, selection of appropriate method, treatment for a deficiency which apparently did not exist, and/or the failure of a clinician to refer the subject to a source which might help to alleviate a serious problem.

In response to questions two and three, it was found that agreement, much agreement, some agreement, little agreement, very little agreement, and disagreement existed in reference to the diagnoses offered by the clinicians. It was difficult to relate the request for tests to the diagnosis because, in most cases, the clinician did not state the tests used by him to support the existence of the problem. The investigator was able to predict accurately from the tests requested the diagnosis which was made by nineteen of the clinicians. For example it was predicted that those clinicians who requested the Bender Visual Motor Gestalt Test would identify an emotional

problem. Nine of the ten who requested the Bender Visual Motor Gestalt Test did identify an emotional problem.

Therefore, it appeared that its diagnosis may have been more related to the requests for the tests than to the results of the tests. The analysis of the case studies revealed that the clinicians' subjective judgment entered into their decisions.

The investigation of agreement in prognosis revealed that not all case studies included a prognosis. In fact, nine of the twenty-seven clinicians did not make a prognosis. Perhaps these nine clinicians felt that it was impossible to make an accurate prognosis of the individual without direct contact with him. However, this was not stated. Some agreement was found in the prognoses of the clinicians. However, since all of the clinicians had access to the scores of the Wechsler Intelligence Scale for Children, more agreement was expected in regard to reading expectancy. There also appeared to be little relationship between additional tests requested and the prognoses made. Thus, in response to questions four and five, some agreement was found in requests for tests and in the prognosis made by the clinicians.

The analysis of questions six and seven revealed very little, if any, relationship between the tests requested and the recommendations made for remedial direction. There also appeared to be little relationship between the clinicians' diagnoses and the recommendations for remedial

direction. For example, only seven of the twenty-five clinicians who identified the subject as having a word attack problem recommended that he be taught word attack skills, only two of the four clinicians who identified the visual memory problem recommended the improvement of visual memory, only four of the nine clinicians who identified the auditory problem recommended treatment for auditory memory difficulty, and only one of the nine clinicians who identified an auditory problem recommended that steps be taken to improve auditory discrimination.

Four of those clinicians who identified a word attack problem failed to recommend any specific method to be used in teaching the subject to read. Two clinicians recommended that diametrically opposite methods be used in teaching the subject to read. There were only six clinicians who recommended that only one specific method be used and who also agreed upon a specific method. One clinician who did not identify the subject as having a word attack problem recommended that two different methods be used in teaching the subject to read.

These facts seem to raise the question of what sources are used for a basis of determining remedial direction. It appeared, in many instances, that a clinician had predetermined remedial direction, that he sought certain problems, discovered their evidence, and then set out to cure them.

Recommendations

1. This study should be replicated using a structured report of the case study. The report would consist of answers in response to specific questions asked by the investigator.

2. A study should be made of the same reading disability when identical tests and information are utilized in the writing of the case studies.

3. A study should be made analyzing the case studies written by clinicians who have previously stated their qualifications and the general orientation of the reading clinic.

4. This study should be replicated for each type of remedial reader as defined by Bond and Tinker (1967).

5. It is further recommended that a study be made of the case study approach as used in reading clinics other than college or university reading clinics.

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APPENDIX A

REFERRAL BLANK FOR EDUCATIONAL DIAGNOSIS

PART I - HOME

NAME _____

Current Date: _____

The information requested below is desired solely for the purpose of gaining a full understanding of the child. Please answer all questions as fully as possible, and return to the Reading Center, Gundersen Hall, Oklahoma State University Stillwater Oklahoma 74074.

GENERAL BACKGROUND INFORMATION

Child's Name _____ Sex _____ Age _____

Reason for referral _____

Place of Birth _____ Date of Birth _____

Father or Guardian's Name _____ Age _____

Home Address _____

Father's Occupation _____

Mother's Name _____ Age _____

Mother's Occupation _____

Parent Marital Status: Living Together _____

Separated _____ Divorced _____

Parents deceased: Father _____ Mother _____

Age of child at time _____

What was the highest grade the father attended? _____

What was the highest grade the mother attended? _____

Is this child adopted? _____ If so, does he
know this? _____

List names of brothers and sisters:

<u>Name</u>	<u>Age</u>	<u>Physical Handicaps</u> (Vision, etc.)
-------------	------------	---

1.

2.

3.

4.

5.

6.

What language is spoken in the home? _____

DEVELOPMENTAL AND MEDICAL HISTORY

Did any of the following occur later than the
expected time?

First tooth _____ Creeping on all fours _____

Sitting alone _____ Walking alone _____

Feeding self _____ Voluntary control of bladder _____

How old was your child when he began to say single
words? _____

Simple sentences or phrases? _____

Does your child now have a speech defect? _____

If so, has any attempt been made to correct it? _____

By Whom? _____

Has anyone ever attempted to change the child's
handedness? _____

Has your child had any serious accidents, operations,
or unusual illnesses (high fevers, prolonged confine-
ment, etc.)? _____

Specify illness and dates _____

Does your child have any physical problems? _____

Do you think your child's vision is normal? _____

Do you think your child's hearing is normal? _____

Do you feel that your child's mental ability is
(check one) low _____ Average _____ Superior _____

Present physical condition (check one) Good _____
Fair _____ Poor _____

FAMILY AND HOME SITUATION

All families have problems. Do you feel that your family has fewer problems _____, average number of problems _____, more problems _____ than the typical family?

Comments _____

How does the child get along with his brothers and sisters? _____

Comments _____

What types of discipline have you found to be most effective in guiding your child?

Give an example: _____

Least effective: _____

Are there any adults besides the parents who play an active part in guiding your child? _____ if so, who? _____

Does the child work? (paper boy, delivery boy, etc.) _____

Does your child have any special interests? _____

If so describe: _____

Are your child's eating habits regular? _____

Are your child's sleeping habits regular? _____

What time does he usually go to bed? _____

SCHOOL ADJUSTMENT

Schools your child has attended:

Name	Location	Grade Level
_____	_____	_____
_____	_____	_____
_____	_____	_____

Child's general achievement in school:

<u>Grade Level</u>	<u>Very Poor</u>	<u>Poor</u>	<u>Average</u>	<u>Above Average</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

What is your child's general attitude toward teachers? _____

What are your child's feeling toward his present teacher? (i.e., like, dislike, changeable, indifferent, etc.) _____

How would you rate your child's popularity among his classmates? (i.e., ignored, rejected, accepted, has many friends of both sexes, etc.) _____

Does your child prefer to work with children who are older or younger? Does your child prefer to work with boys or girls? _____

Are there some subjects that your child likes more than others? (Indicate) _____

Has your child ever failed a grade? _____

If so, what level? _____

How did your child react to this failure? (i.e., Did the child profit from it or did it only make the situation more difficult? _____

Has your child ever received any special help in his subjects in school? (i.e., tutoring in reading, arithmetic, etc.) _____

Does the school consider your child to be a serious learning and/or discipline problem? _____

What do you feel are some of the reasons that cause your child to have difficulty in school? _____

BEHAVIORAL CHARACTERISTICS

The following is a list of characteristics which we can often observe in youngsters if we have the opportunity for observation. Please encircle those which you think fit the child.

BLAMES OTHERS FOR HIS TROUBLES: always usually
once in a while never don't know

CRIES: often occasionally rarely never don't know
(unless badly hurt)

DAYDREAMS: often occasionally rarely never
don't know

DISCOURAGES: easily occasionally rarely don't know

FRIENDLY: very usually seldom not don't know

GETS IN FIGHTS: often occasionally rarely never
don't know

HAPPY, LIGHT HEARTED: always usually once in a while
never don't know

HAS TO BE PRODDED TO GET "THINGS DONE": always usually
once in a while never don't know

LIES: often occasionally rarely never don't know

EDUCATIONAL INTEREST SPAN: very good good poor
very poor don't know

FINISHES REQUIRED WORK: always usually once in a while
never

LISTENS TO REASON: always usually once in a while
never don't know

NERVOUS, IRRITABLE: always usually once in a while
never don't know

OBEYS: always usually once in a while never
don't know

POPULAR WITH PALS: always usually once in a while
never don't know

STEALS, DISHONEST: always usually once in a while
never don't know

TALKS BACK: always usually once in a while never
don't know

TEMPER TANTRUMS: always usually once in a while
never don't know

TIMID, SHY: always usually once in a while never
don't know

BED-WETTING: often occasionally rarely never don't know

HURTING PETS: often occasionally rarely never
don't know

THUMB SUCKING: often occasionally rarely never
don't know

STRONG FEARS: very many some few don't know

In what ways can we be of help to you? _____

Name _____

Position _____

Date _____

VITA

Glen Ralph Anderson

Candidate for the Degree of
Doctor of Education

Thesis: SURVEY OF THE APPROACH TO REPORTING A CASE STUDY
IN UNIVERSITY AND COLLEGE READING CLINICS

Major Field: Elementary Education

Biographical:

Personal Data: Born in Bolivar, Missouri, the son of
Mr. and Mrs. E. V. Anderson.

Education: Attended public elementary schools in
Missouri; graduated from Bolivar High School,
Bolivar, Missouri; received the Associate of Arts
degree from Southwest Baptist College in 1954;
received the Bachelor of Science degree with a
major in Elementary Education from Southwest
Missouri State College, Springfield, Missouri in
1958; received the Master of Science degree with
a major in Elementary Administration and Super-
vision from Drury College, Springfield, Missouri
in 1960; was a member of the NDEA Reading Super-
visors' Institute at Arkansas State University in
1966; received the Specialist degree with a major
in Elementary Administration and Supervision with
emphasis in reading at Central Missouri State
College, Warrensburg, Missouri in 1969; completed
requirements for Doctor of Education degree at
Oklahoma State University, Stillwater, Oklahoma
in July, 1970.

Professional Experience: Elementary Principal and
eighth-grade teacher, Pleasant Hope, Missouri,
1954-55; Elementary Principal and seventh-grade
teacher, Bolivar, Missouri, 1955-1962; Elementary
Principal and sixth-grade teacher, 1962-66,
Bolivar, Missouri; Reading Consultant (Grades K -
12), Bolivar, Missouri, 1966-1968; Supervisor of
Practicum Students, NDEA Reading Institute,
Central Missouri State College, Warrensburg,

Missouri, Summer, 1968; College Reading Improvement Instructor, Oklahoma State University, Stillwater, Oklahoma, 1968-1969; Instructor of Introduction to Reading Problems, Oklahoma State University, Stillwater, Oklahoma, 1969; Reading Improvement Courses for Adults, Oklahoma State University, Stillwater, Oklahoma, 1968-1969; Co-director of Workshop for Teachers in Diagnosis and Remediation of Reading Difficulties, Oklahoma State University, Stillwater, Oklahoma, 1969; Supervision of Practicum, Oklahoma State University, Stillwater, Oklahoma, Summer, 1969; Director of Workshop for Teachers in Diagnosis and Remediation of Reading Difficulties, Central Missouri State College, Warrensburg, Missouri, 1969; Assistant Professor of Education and College Supervisor of Off-Campus Student Teachers, Central Missouri State College, Warrensburg, Missouri, 1969-1970.