AN EXPERIMENTAL STUDY OF ACHIEVEMENT

BY PROBLEM READERS

A Master's Thesis
Presented to
the Faculty of the School of Graduate Studies
Indiana State College

In Partial Fulfillment
of the Requirements for the
Master of Arts Degree

by
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July 1964
The thesis of Mildred L. Wills, contribution of the School of Graduate Studies, Indiana State College, Series I, Number 848, under the title, "An Experimental Study of Achievement by Problem Readers," is approved as counting toward the completion of the Master of Arts Degree in the amount of six semester hours of graduate credit.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. THE PROBLEM AND DEFINITIONS OF TERMS USED</td>
<td>1</td>
</tr>
<tr>
<td>The Problem</td>
<td>1</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>1</td>
</tr>
<tr>
<td>Importance of the Study</td>
<td>2</td>
</tr>
<tr>
<td>Working Hypothesis</td>
<td>3</td>
</tr>
<tr>
<td>Definitions of Terms Used</td>
<td>3</td>
</tr>
<tr>
<td>Problem Reader</td>
<td>3</td>
</tr>
<tr>
<td>Grade Expectancy</td>
<td>4</td>
</tr>
<tr>
<td>Psychological Approach</td>
<td>4</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>5</td>
</tr>
<tr>
<td>Size of the Group</td>
<td>5</td>
</tr>
<tr>
<td>Length of the Study</td>
<td>6</td>
</tr>
<tr>
<td>Subjectivity of Teacher Observation</td>
<td>6</td>
</tr>
<tr>
<td>Organization of the Remainder of the Thesis</td>
<td>7</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE AND RELATED RESEARCH</td>
<td>8</td>
</tr>
<tr>
<td>Recent Literature in the Area of Achievement</td>
<td>9</td>
</tr>
<tr>
<td>Recent Literature in the Area of Problems as Related to Complexity, Causation, and Diagnosis</td>
<td>25</td>
</tr>
<tr>
<td>Reading and the Self-Concept</td>
<td>35</td>
</tr>
<tr>
<td>Summary</td>
<td>53</td>
</tr>
</tbody>
</table>
CHAPTER IV

III. METHOD OF PROCEDURE AND TREATMENT OF FINDINGS

Selection of Subjects and Description of the Study

Selection of the Subjects

Experimental group

Materials Used

Basal program

Library materials

Current events materials

Materials for accelerated readers

The Program as Dictated by a Psychological Approach

Basic fundamentals

Application to personal needs

Application to reading needs

Statistical Treatment of Data

Treatment of Group Data

Treatment of Individual Data for Problem Readers

Case Study: Problem Reader No. I.

Case Study: Problem Reader No. II.

Case Study: Problem Reader No. III.
### LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Data on Problem Readers, October, 1963</td>
<td>58</td>
</tr>
<tr>
<td>II. Data on Problem Readers, May, 1962</td>
<td>72</td>
</tr>
<tr>
<td>III. Master Data Table, Raw Scores</td>
<td>99</td>
</tr>
<tr>
<td>IV. Statistical Treatment of Group Reading</td>
<td>102</td>
</tr>
<tr>
<td>V. Problem Reader #1</td>
<td>103</td>
</tr>
<tr>
<td>VI. Problem Reader #2</td>
<td>104</td>
</tr>
<tr>
<td>VII. Problem Reader #3</td>
<td>105</td>
</tr>
<tr>
<td>VIII. Problem Reader #4</td>
<td>106</td>
</tr>
<tr>
<td>IX. Problem Reader #5</td>
<td>107</td>
</tr>
<tr>
<td>X. Problem Reader #6</td>
<td>108</td>
</tr>
<tr>
<td>XI. Problem Reader #7</td>
<td>109</td>
</tr>
<tr>
<td>XII. Problem Reader #8</td>
<td>110</td>
</tr>
<tr>
<td>XIII. Problem Reader #9</td>
<td>111</td>
</tr>
<tr>
<td>XIV. Problem Reader #10</td>
<td>112</td>
</tr>
</tbody>
</table>
CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

Regardless of what is considered ideal, in most instances in the public schools the last effective formal instruction in reading takes place at sixth grade level. It is probable that every sixth grade class contains children who are classified as problem readers; some of these problem readers have average or above-average ability, yet they read at a level of from one to two years below grade expectancy. Many of these children have leadership qualities which are never discovered due to their lack of self-esteem. In the interest of the highest comfortable achievement of these students, a need was felt for an approach which would free the children to learn.

I. THE PROBLEM

Statement of the Problem

It was the purpose of this study (1) to determine whether or not a psychological approach to the teaching of reading would succeed with problem readers in a heterogeneous sixth grade class; (2) to determine, if such an approach were used, whether there would be a marked increase of successful achievement in the content areas; and (3) to attempt to ascertain, although subjectively through teacher
observation whether there would occur a change in the self-esteem of these problem readers.

Importance of the Study

One cannot over stress the necessity for each child to attain comfortable maximum achievement in reading during his elementary school years. Success in later school endeavor depends to a great extent upon reading skills developed by the child during the first six years of his school life. A student cannot be expected to achieve successfully in the content areas unless he has first mastered the reading skills with which to approach these subjects. Reading, and success or lack of success in reading as well as in all aspects of elementary school achievement, is important also to the child's sense of accomplishment.

To develop normally and wholesomely, every child must know that he can achieve and must experience enough success as the results of his efforts to have confidence in himself and to respect himself.¹

It becomes apparent, then, that success in reading for all children should be a prime consideration of the elementary school teacher as he surveys the needs of his

The low achieving level of the problem reader with average or above-average intelligence was considered to be purely a psychological problem which possibly might be solved through use of a psychological approach. By looking at the needs, both academic and personal, of the individual child and by attempting to meet these needs; by structuring the classroom so that these students had a high income of esteem; by removing tension in the reading situation; by providing for the diagnosis of needed reading skills under many and varying situations; and by reinforcing those skills at various and opportune times during the school day when working in the content areas, it was felt that it should be possible to bring the reading achievement of the problem reader to, or near, grade expectancy. It was expected that an increase in achievement in the content areas should take place; it was also expected that there would be an increase in self confidence.

II. DEFINITIONS OF TERMS USED

Problem Reader

For the purpose of this study, a problem reader was
defined as that individual (with an average or above-average ability) who was achieving, as determined by the test instrument used, at a level of one or more years below grade expectancy.2

Grade Expectancy

The grade expectancy, for each problem reader, was determined as the grade level at which a child could be expected to achieve according to his ability on the basis of the measuring instrument used.3 It should be noted that a child may have been functioning below grade expectancy and still have achieved at the grade level considered normal if a grade level measure were used.

Psychological Approach

The approach employed in an attempt to reach the problem readers was defined as a psychological approach since it placed the deep personal needs of the individual as first in line for consideration. Observations were made of the ten defined problem readers on the playground, in the

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3 Ibid.
classroom both in informal and formal situations, and as they went to and from school. Conferences which were considered exceptionally helpful in determining the children's needs were held with parents. After carefully evaluating the personal needs of each child, consideration was given to the academic needs of each as determined by measures considered to be adequate for this study. All of these factors were then considered before it became possible to attempt to reach each child through his needs. A psychological approach thus encompassed more than mere individual instruction, more than mere recognition of individual differences; a psychological approach required a deep, speculative consideration of the individual child, in toto, not as part of a larger group. Strickland has defined this type of approach:

Taking care of individual differences does mean providing for varying rates of learning and varying rates of skill. But it means also, and perhaps this is even more important, it means knowing and taking care of the deep personal needs of boys and girls so that we release all the power they have to learn—to reach out with confidence and assurance for each new experience.\(^4\)

III. LIMITATIONS OF THE STUDY

Size of the Group

Of the forty students tested in the self-contained

\(^4\)Strickland, op. cit., p. 127.
classroom, only ten students (eight boys and two girls) were considered to be seriously underachieving, i.e., problem readers according to the definition. It was felt that a larger number of problem readers might have provided more valid results.

Length of the Study

The actual work of meeting the various needs of the problem readers could not be begun until all testing, conferencing, and certain observations had been completed. Therefore, the length of time involved in the actual experiment totaled only six months, from November 1, 1963, to May 1, 1964.

Subjectivity of Teacher Observation

Although the experimental group was arrived at definitively through objective measures and although definition of academic needs and reading skills to be taught was made through objective techniques, it was recognized that evaluation of personal needs and self-esteem was reached by subjective techniques. It was decided to rely upon teacher observation, even though subjective, for the following reasons: The major assumptions concerned achievement, and this was measured objectively; had a personality rating scale or test been used, objectivity of the measure would
not have been guaranteed; observation of children by experienced teachers is considered by many educators to have some validity in evaluation of personality factors.\textsuperscript{5}

Thus, it was noted that the size of the group, the period of time involved, and the subjectivity of teacher observation in assessing self-esteem did place limitations upon the study.

IV. ORGANIZATION OF THE REMAINDER OF THE THESIS

The remainder of the thesis has been divided into three chapters. Chapter II presents the review of literature related to reading in the areas of achievement, problem readers, and reading and the self concept. Chapter III treats the description of the subjects, materials, and actual experimental design; provides a graphic picture of the changes which occurred; and presents data bearing on the significance of the changes. In Chapter IV are found the summary, conclusions, and recommendations.

CHAPTER II

REVIEW OF LITERATURE AND RELATED RESEARCH

Each year, much research is done in the field of reading. Since the time that compulsory education was legislated in this country, parents, teachers, and even children have been concerned with the reading process, which, in many minds, is synonymous with education. A complex process involving, according to Tinker and McCullough, the acquisition of eighty-three different skills and involving the dependent variables of perceptual development, intellectual ability and mental age, background of personal experience and environment, auditory and visual discrimination, language as well as sensory development, health, attitudes, interests, social and emotional development, and the independent variable of instructional method and procedure, reading invites manifold interest.

Since this particular study was concerned primarily with achievement in reading by problem readers as related to the self-concept, the study of related literature and research


was concentrated mainly in these related areas. An attempt was made to give as broad a view as possible of recent thought and findings under three headings: (1) achievement; (2) problems; and (3) self-concept.

I. RECENT LITERATURE IN THE AREA OF ACHIEVEMENT

Of the studies reviewed, unanimous agreement existed that teachers must learn a new and entirely different concept of a pupil's achievement than that of grade level production. Torrance pointed out that traditional concepts of underachievement and overachievement based upon a comparison of achievement and intelligence quotient no longer make sense. He indicated that educators fail to take into account relationships between capacities and needs of the individual and the ability of the environment to supply outlets for these. According to a particular school's philosophy and definition of achievement, there may be many underachievers and few overachievers; in others, the reverse may be true. Differences in concept even occur within the same school between different classes, according to the philosophies and definitions of achievement by various teachers. There also

exist differences in concept as to what type of pupil over-achieves and what type underachieves. Torrance has found that, in general, underachievers tend to have higher intelligence quotient scores and lower scores on tests of creative thinking than overachievers. He cited cases in which underachievement might have been related to teacher creativity, pressure to conform, teachers' tendencies to place too much value on visible industry, rejection of different and original ideas and opinions, and authoritarian methods of teaching. Actually, Torrance placed much blame on teachers for underachievement and concluded with a plea for a new definition of underachievement and an educational world in which exists a new "concept of underachievement, a concept in which overachievement has no place, a concept which supplies its own challenge."4

Robinson described five typical underachievers: The slow learner, the retarded reader with normal ability, the bright underachiever, the reluctant reader, and the culturally or socially deprived reader.5 She reported that the slow learners, with intelligence quotients of from seventy to

4Ibid.

ninety, learned at a slower rate than average in all school subjects; however, reading achievement lagged behind all other areas of learning as well as lagging behind reading capacity. Generally, by the time the slow learner had acquired the mental age and language facilities to learn to read, he was beyond the grade in which beginning reading was taught. In Robinson's experience, the retarded reader with normal ability usually talked better than he wrote and learned more from listening than from reading. Generally, he was frustrated, as he really wanted to learn, and some were personally maladjusted. Some hid their dissatisfaction through conformity, while others were considered lazy.

Robinson defined the reluctant reader as one who has acquired the necessary skills and ability to score on standard tests, but who never used his ability. The estimate of reading disability in the culturally and socially deprived group she placed at 50 per cent. These children needed more time for learning tasks; many concepts were not in their speaking and listening vocabularies, and they learned less from what they heard. She also felt that many teachers were unaware of the problem with the bright underachiever, as he scored average or above-average on tests. Elementary teachers concerned with classroom performance may be unaware of such a student's potential for reading, and he
may not be recognized as an underachiever until junior or senior high school when there is a demand for superior reading in the content areas. Robinson challenged the schools to accept full responsibility for reducing underachievement as rapidly as possible. 6

Recent research on current practices by teachers in teaching reading found that little is done about the gifted underachiever; he is overlooked in favor of the slow learning child. The Harvard research team found that the ratio of remedial teachers to teachers for the gifted are one thousand to one. 7

Carey cited as the greatest danger in working with the bright underachiever the underestimation of his intelligence and overestimation of his reading achievement. 8 She brought out the idea that sensitive children may realize they are not working up to potential, and, in some cases, the brighter they may be, the more keenly will they feel the hurtful consequences of their underachievement and so

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6 Ibid.


"establish the vicious circle in which underachievement feeds on itself and creates its own obstacles to correction."9 Carey made the broad generalization that anything which interferes with the individual's physical or mental health may serve to depress his reading achievement.10

Hardin, too, discussed the idea that it was highly probable that the bright underachiever may become a remedial case because of past failures by teachers to consider interest level and attitudes toward reading and toward himself.11 Or, underachievement may have been provoked because of failure to motivate this bright student into a successful reading experience. The bright underachiever may also be a non-conformist, and his lack of conformity might provoke teachers and peers. At the same time, he may fail to realize why he receives disapproval from others. Diagnosis, according to Hardin, must include physiological, personality, and educational factors. Attitudes, interests, and personality characteristics of the bright underachiever are held to be

9Ibid.
10Ibid., p. 78.
vital factors in need of intensive and extensive exploration.\textsuperscript{12}

Of interest to many researchers in the field of reading were those factors or combinations of factors which were considered by some as causal to underachievement and were considered by others as merely being concomitant to underachievement. In a study designed to call attention to factors which operate as inhibitors to reading growth, Robinson studied thirty-nine severely retarded readers, after a thorough survey of literature had been made in order to determine abnormalities considered operant as causes.\textsuperscript{13}

Specialists who were expert in each area were selected to evaluate the abnormalities as basic to reading failure. Correction of one defect at a time was made, and the effect of this correction upon reading growth was noted. Anomalies were not labeled as causes until correction of them led to improvement in reading. The causes often appeared in constellations, and the composition of the constellation varied with the child. Maladjusted homes or unsatisfactory interfamily relationships were considered to be causes among

\textsuperscript{12}Ibid.

\textsuperscript{13}Helen M. Robinson, "Causes of Reading Failure," \textit{Education}, LXVII (March, 1947), 422-25.
slightly more than half of the cases. Emotional maladjustments recognized as severe by a psychiatrist were considered causal in about one-third of the cases. Visual defects were found to be causal in about one-half of the cases studied, while inappropriate adaptation of methods of teaching seemed to be causes in less than one-fourth of the cases. Alexia or some functional or structural deficiency in the brain as identified by the neurologist seemed to operate as a cause in less than one-fourth of the poor readers, and speech difficulties were causal in less than one-fourth of the cases. The only glandular disturbance found by the endocrinologist was mild hypothyroidism, and that in less than one-tenth of the cases; hearing loss was causal in less than one-tenth of the cases. Intelligence and verbal ability were adequate for reading in all of the cases studied.\textsuperscript{14}

Later studies tend to challenge the weight given by Robinson to maladjusted homes and unsatisfactory inter-family relationships, although it may have been a matter of lack of definition of those terms by Robinson. Mitchell studied 141 sixth grade pupils in order to compare and analyze actual reading achievement and grade expectancies in relation to six factors which had been considered causal.

\textsuperscript{14}\textit{Ibid.}
to reading underachievement. These factors were: Broken homes (equated with the fact that the child lived with his mother and father), school transfer, non-promotion, low intelligence quotient, premature school entry, and inferior housing conditions (houses with an assessed valuation of less than $5,000.00 were considered inferior). It was the hypothesis that reading underachievement of boys or girls was not significantly related to any one of the six factors or to any combination of the six factors. The sixth graders were given the Science Research Associates Reading Achievement Test and the Science Research Associates Test of General Ability to determine both intelligence quotient and grade expectancy. An underachiever was defined as that student whose achievement fell one or more years below grade expectancy. Data relative to the other factors were secured through surveys of the school communities and surveys of assessed property valuations, pupil questionnaires, cumulative records, and conferences with teachers and principals of the schools involved. The hypotheses were confirmed. It was found that reading underachievement was not significantly related to any of the six factors; neither was read-

15 Virginia White Mitchell, An Analysis of the Grade Expectancy and Actual Reading Achievement of Sixth Grade Pupils, With Special Attention to Six of the Possible Factors in Reading Underachievement (unpublished Doctoral Dissertation, Indiana University, 1962), 1-73.
ing underachievement related to any combination of the factors; these six factors were found to be no more significant in relation to reading underachievement of boys than of girls. Mitchell concluded from the study that children may read in advance of their grade placement and still be underachievers; current school programs provided more adequately for children of low intelligence than of high intelligence; the types of information found on most school records were ineffective in helping teachers predict reading underachievement; intelligence quotients were inadequate indicators of expectancy; reading underachievement may be represented by a group whose actual grade level equivalents covered a range of many years. She recommended that both achievers and underachievers be included when studying reading achievement.

Mitchell's conclusion that current school practices provide more adequately for children of low intelligence than for children of high intelligence has been borne out by the recent research on reading by the Harvard team of researchers.16 They found that elementary teachers were the first to admit that, due to pressures brought about by large classes and over-crowded schedules, the gifted child

16 Austin and Morrison, op. cit., p. 102.
was the one most often neglected. The need for attention to the slow learner who was having difficulty was so much more apparent, that, "the conscientious teacher, in trying to do the best possible job, often overlooks the gifted child because his need for help in reading is less obvious." 17

The research found numerous reasons as to why better provisions were not made for individual differences. Time was one factor, class size another. Others were: (1) Classification of children on a graded basis and the underlying pressures to see that all, despite differences in emotional, physical, or mental abilities, were exposed to the curriculum designated to the given grade so that they might be promoted to the succeeding grade. (2) Rigid classification of materials on a graded basis and the reluctance of teachers and administrators to allow children to progress vertically into materials of the next grade. (3) The inability of the teacher to rid herself of the concept that she was only expected to teach the content appropriate for her assigned grade. 18

Witham suggested that the self-contained classroom provided the best setting for diagnosing and aiding the

17 Ibid.
18 Ibid., p. 5.
underachiever in reading. He stated that teachers should be able to command all techniques for aiding the underachiever, including informal techniques such as classroom observation, conferences, the informal reading inventory, and directed reading activity. He concluded that teachers must convince the underachiever that, by his own efforts, he could change his status, and that the more a child believed this, the more likely his potential would be realized.

Curry studied 1,773 sixth grade children from a large city school system to determine some of the characteristics of underachievers and overachievers, and, if possible, to clarify any misconceptions regarding conditions which might be influential in bringing about overachievement or underachievement. Data were obtained on the children's chronological age, intelligence quotient, sex, socio-economic status, scholastic achievement, and information as to occupation of mother. Measures used were the California Test of Mental Maturity, California Achievement Test, and questionnaires to parents. Conclusions were: The number of overachievers


and underachievers was almost equal—111 underachievers and 116 overachievers; these groups each comprised approximately 6 per cent from the population of the study. Boys outnumbered girls two to one within the underachieving group, and girls outnumbered boys more than two to one within the overachieving group. The underachievers were those who were more capable students, while the overachievers were primarily those who were slightly below average. The underachievers were achieving almost one year below actual grade placement; the difference in chronological age was significant, with the overachievers being five months older than underachievers. The number of working mothers of children in the two groups was nearly equal. The middle socio-economic group contributed a larger number of underachievers and overachievers than the upper and lower groups. This, however, was to be expected since the population in the middle group is larger. In underachievement, the upper socio-economic status group contributed three times the number contributed by the lower socio-economic status group.

Spicola studied 381 sixth grade boys to determine the relationship between reading achievement and the seven variables of chronological age, mental age, socio-economic index, self-concept, school entrance age, sociometric status, and educational level of father, and further, the relation-
ship between the self-concept and chronological age, mental age, socio-economic index, school entrance age, sociometric status, and educational level of father. Adequate measures were used in all instances. A coefficient of correlation was computed for the variables, testing the correlations for significance at the .05 level of confidence. A positive significant correlation was found between reading achievement and mental age and reading achievement and self-concept, as well as between self-concept and mental age and self-concept and educational level of father; a negative significant correlation was found between reading achievement and chronological age, reading achievement and socio-economic index, and reading achievement and educational level of father, as well as between self-concept and socio-economic index. No significant correlation was found between reading achievement and sociometric status; no significant correlation was found between self-concept and chronological age, self-concept and school entrance age, or self-concept and sociometric status. The statement was made that the negative correlations between reading achievement and sociometric status and self-concept and sociometric status were the result of the scoring devices. Spicola stated that the

intelligence concept was found more discriminating regarding reading achievement than the general self-concept, since many more boys perceived themselves as inadequate than actually were low in ability according to the standardized test and that boys perceiving themselves as very low in learning ability were lowest in reading achievement, even though average in mental ability. This view of intelligence concept is but one aspect of self-concept and should be treated as such.

Underachievement at the beginning stages of reading instruction has long been of interest in research. For, if underachievement occurs during initial instruction, it is later compounded as the child builds a faulty storehouse of reading skills upon the shaky foundation of underachievement in the initial stages of learning to read. Some educators have felt that raising school entrance age might cure many of the achievement ills in beginning reading. Recent research at Boston University has confirmed the fact that teachers of beginners need to look more closely at achievement, its definition, and causes; however, their studies have found no support for the idea that raising the entrance age will affect reading achievement favorably. It was found

that nine months difference in chronological age was accompanied by only three months growth in mental age for some children and that "apparently nine months of maturation at home were not especially profitable in terms of reading readiness." Studies which inquired into the later achievements of differing ages at first grade entrance found that the younger children maintained achievements which equalled that of the older children and that apparently it was no handicap to be among the youngest group to enter first grade. It was also learned that mental age as an indicator of readiness for reading in and of itself was not enough as a predictor of success. It was recommended that teachers search for more specific factors in the prediction of beginning reading achievement than those in tests of mental maturity.

Their recent research has uncovered other factors which affect initial reading achievement. Gavel tested 1,506 children on relation of September knowledge of letters to June first grade reading achievement. All of her tests of letter names correlated higher with reading achievement than did mental age. Olson provided evidence of the importance of letter knowledge in acquiring a sight vocabu-

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23Ibid.  
24Ibid., p. 4.  
25Ibid., p. 5.
lary; he concluded that while a knowledge of letter names did not always assure high reading achievement, the lack of that knowledge assured low reading achievement.26 Another study of reading achievement in elementary schools found girls superior to boys at all grade levels. These differences appeared in the reading readiness stage, and the origin of these reading differences was found in lower perception ability for word elements.27 Harrington found that the factors which affect beginning reading achievement are, in descending order: Knowledge of phonics, visual discrimination, auditory discrimination, and mental age.28

As a conclusion from their comprehensive research in reading, Austin and Morrison recommended that no single method of instruction in beginning reading be used that that a variety of approaches be utilized and that these be adjusted to the needs and competencies of the individual children.29 It was further recommended that research be initiated to determine the interrelationships of personality, socio-economic backgrounds, and ability and the various approaches to teaching reading, "particularly at the initial stages of instruction."30

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26 Ibid.  
27 Ibid., p. 6.  
28 Ibid., p. 28.  
29 Austin and Morrison, op. cit., p. 221.  
30 Ibid.
In being concerned with underachievement in reading, the immediate task, of course, is to remedy the retardation. A major task also is to determine the extent to which the schools contribute to underachievement. Four million children in the schools in this country are underachievers.  

II. RECENT LITERATURE IN THE AREA OF PROBLEMS AS RELATED TO COMPLEXITY, CAUSATION, AND DIAGNOSIS

In considering vital problems related to underachievement, recognition must be given to the complexity of the reading task, the multiplicity of factors related to causation, and the failure to make proper diagnosis.

Successful reading is achieved in the same manner in which other successful learning experiences are achieved, and methods of teaching are related to the learning process. In one sense, teachers have no direct control over a child's learning. Instead, they exert an indirect control over it by selecting, ordering, and presenting the tasks to be learned. These tasks must be manipulated professionally so that the child's learning is facilitated by appealing to his interests.

by cognizance of his level of physical, mental, and emotional development, and by being aware of his established competency and potential. The teacher who guides children to mastery in reading faces a complex task.  

Smith developed the idea that retardation is a matter of degree and that there are levels of retardation; each level tends to be characterized by its own symptoms and requires its own remedial techniques. He further stated that retardation might be general or specific. General retardation should refer to a low level of reading ability as compared to mental age. Specific retardation suggests a weakness in a specific area or areas. He indicated that retardation could also be considered as a limiting disability or a complex disability, the limiting disability being considered as serious deficiencies in basic skills which affect his entire reading growth whereas complex disability would involve severe reading retardation as shown by a marked discrepancy between his achievement and ability; in addition, the person with complex disability would show symptoms of personal problems, tension, and antipathy to reading.

Austin concluded that failure on the part of a student

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32 Austin and Morrison, op. cit., p. 11.

33 Smith, op. cit., p. 421.
to develop certain skills and abilities, as well as any tendency to overemphasize some skills to the exclusion of others or to use faulty approaches, might handicap his entire reading growth.\textsuperscript{34} Deficiencies in comprehension, word identification, or any other of the skills basic to reading success are common defects among disabled readers, and their presence in isolation or in combination must be determined before an effective instructional program could be defined.

The differing instructional needs of children of the same achievement were studied by Baumann.\textsuperscript{35} Children in grades two, four, and six were given a series of tests in the various sub-skills of reading. The 160 children in each grade were divided into quartiles on the basis of reading achievement tests and teacher ratings. Scores on the various subskill tests brought out that children of the same level of general reading ability were in quite different quartiles in subskills. Some of the subskills in which there were wide spreads of abilities within the same general achievement were: Word analysis, use of diacritical marks, dictionary location of words, oral reading speed and errors, written

\textsuperscript{34} Mary C. Austin, "Diagnosis of the Retarded Reader," The Underachiever in Reading; Proceedings of the Annual Conference on Reading, H. Alan Robinson, editor (Chicago: University of Chicago Press, 1962), p. 36.

\textsuperscript{35} Durrell, op. cit., p. 46.
and oral recall, and elaborative thinking in relation to reading. The conclusion was that ability grouping in reading does not eliminate the need for providing for individual differences in reading subskills.

Long studied retarded readers in second, fourth, and sixth grades whose scores on Test R of the Iowa Test of Basic Skills fell within the lowest 10 per cent of their respective grades. The subjects were thirty-four students randomly selected from the ninety or above intelligence quotient range at each grade level and seventeen randomly selected from the below ninety intelligence quotient range. She found that deficiencies exhibited by retarded readers in word recognition and word analysis were most frequent in the lower grades; that the amounts of retardation in reading exhibited by retarded readers increased through the grades; and that deficiencies exhibited by retarded readers in oral reading, silent reading, listening comprehension, and general comprehension were most frequent in the upper grades. She also found that retarded readers with intelligence quotients below ninety have basically the same reading deficiencies as those students with intelligence quotients above ninety; that teachers of retarded readers did not instruct the

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students on their appropriate reading levels, and they overestimated the student's reading ability; and that teachers of retarded readers were not aware of reading deficiencies at the grade levels where they most frequently occurred.

Smith reported that because students have diverse needs and an uneven development of reading skills, individual instruction must be provided. This did not mean that each student must be taught one at a time, but it did imply that grouping within a classroom must be flexible enough that the individual needs of each retarded reader would be continually met. Instruction should be individualized and should be based upon a diagnosis of the reading difficulty. The climate for remedial instruction should be one in which a student could make progress, and the retarded reader should be accepted as a person and at his level of development.

Smith emphasized that reading and the entire program of growth and development are interdependent. Differences in physical, social, emotional, and attitudinal development require a different approach for each. When one adds to the problems generated by these diverse developmental growths

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38 Smith, op. cit., p. 377.
the problems which stem from differences in intellectual development, the complexity of the reading problem is more readily understood. The range of achievement levels by the second grade is ordinarily about four grades, and by the sixth grade, reading achievement may vary by seven grades. This tremendous range of achievement requires a reading program that provides all children at all levels with needed reading skills. A single standard reading program fails to adjust to the wide variety of individual differences in reading and is delimited by grade levels, although development is not thus limited and needs cannot thus be limited.

Problems are caused. Although some research listed causes which directly led to reading failure, Harris emphasized that it is misleading to consider any one factor as if it were an independent cause in itself.39 Using as definition for cause, "The relation obtaining when a given event called the cause invariably precedes a certain event called the effect,"40 he reiterated that causation is a tricky question. The problem with this definition in relation to reading is that an invariable relationship between a possible cause and a reading failure has never been found.


40 Ibid.
He has classified areas of causation under the two broad headings of constitutional and environmental. Under constitutional, he placed sensory handicaps, neurological handicaps, endocrine problems, and problems relating to sidedness and directional confusion. Under environmental, he placed socio-cultural factors, educational factors, and emotional factors. Among educational practices which have contributed to problems in reading, Harris cited as the most prominent the failure to meet and provide for individual differences, motivation (he felt that some children stop learning as a revolt against boredom), and failure to diagnose errors quickly.\textsuperscript{41}

Austin, too, has written of the multiple causation inherent in reading disability.\textsuperscript{42} She has found just three general physical factors causative: Malnutrition, infection, and endocrine disturbance. Hearing, as well as vision, was cited as important also, since reading is dependent on language development. She concluded also that personality difficulty may often be a cause of reading failure or result from it. "Often, but not always,"\textsuperscript{43}

\begin{itemize}
  \item \textsuperscript{41}Ibid., pp. 21-30.
  \item \textsuperscript{42}Austin, \textit{op. cit.}, p. 38.
  \item \textsuperscript{43}Ibid.
\end{itemize}
Ort listed six obstacles to reading achievement which are in need of conversion.  

(1) Teachers must realize that there are many aspects to learning and must give the child happy, good, enriching concepts. As teachers "write these factors into the child's personality, they must entice him into wanting to read."  

(2) There is need for appealing materials for the boys and girls to read. For the child who "catches" the reading process late, there is a great need for content materials having a basic beginning vocabulary but with a high level of reading interest, clearly stated concepts, and a format to invite reluctant eyes.  

(3) There is a need for honesty in facing the problem by the child. The teacher who fails to be honest with the child is neither kind, fair, nor intelligent.  

(4) There is a need for experimentation as to the best methods with problem readers.  

(5) There must be prevention of reading problems. Emphasis is on remedial work, and there is a need for greater emphasis on sound practices, especially toward initiatory practices.  

(6) Something must be done about student apathy. Ort suggested that the worst drop-outs are those who are in school in reality, but whose minds have  

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45 Ibid.
not been invited to stay in the classroom.\textsuperscript{46}

Causes of reading underachievement, it can be stated with accuracy, are many and varied. However, this is the only statement about causation that can be put forth as an absolute.

Harris suggested a common-sense attitude on the part of teachers toward diagnosis.\textsuperscript{47} He found that the term has seemed formidable to some teachers and said that it should be taken from its medical setting. The word diagnosis comes from Greek roots which mean "to know through or to know thoroughly."\textsuperscript{48} In education, it refers to a straightforward process of wanting to find out what is wrong, what caused it, and what can be done about it. Therefore, diagnosis is nothing more than application of a straightforward, common-sense, problem-solving approach to the study of children who have difficulties in reading. It is done by use of the common question words--who, what, where, how, and why.\textsuperscript{49}

Austin reported that, in diagnosis, too many teachers

\textsuperscript{46}Ibid., pp. 489-92.

\textsuperscript{47}Albert J. Harris, "The Diagnosis of Reading Disabilities," A Report of the Sixteenth Annual Conference and Course on Reading, Corrective and Remedial Reading (Pittsburgh: University of Pittsburgh, 1960), 31.

\textsuperscript{48}Ibid.

\textsuperscript{49}Ibid., p. 37.
misinterpreted test results, placidly accepting a 6.2 grade placement score, rather than looking beyond to mental age and expectancy. She recommended that group reading and intelligence tests, teacher observation, informal tests, and school history all be included as diagnostic tools. She cautioned teachers to use a group intelligence test with little or no reading, otherwise the results would reflect the disability in reading rather than the probable learning rate.

Smith recommended that the skillful teacher use every available means for making the best possible diagnosis. But, he emphasized, identification is not enough. Diagnosis is meant to lead to remediation, and in making the transfer, recognition must be given to certain dangers. Sometimes the child's symptoms may lead a teacher to take faulty steps toward remediation, and what may appear to be a cause of difficulty might be quite unrelated or may be a result or a symptom of his problems.

The Harvard research team found that all too often children who should have been given special help in reading, either because they were advanced or disabled, were not identified until the intermediate grades. In fact, they

50 Austin, op. cit., p. 34.
51 Smith, op. cit., p. 428.
52 Austin and Morrison, op. cit., p. 231.
learned that in some systems disabled readers were not permitted to have corrective instruction until they had failed repeatedly within the regular classroom. This is a regrettable delay, since the factor which contributed to the initial disability may compound. They found also that able readers who were offered instructional programs which neither challenged nor stimulated their ability sometimes became reluctant or underachieving readers. They recommended that gifted and disabled readers be identified early in the primary grades and that persons who were selected to work with exceptional readers be well prepared for these roles as well as having been successful classroom teachers.

III. READING AND THE SELF-CONCEPT

In considering the relationship of personality and reading, two basic tenets must be accepted: There is a definite relationship between reading ability and self-concept; the self-concept is basic to personality. Much of the literature is concerned with which is cause and which is effect. This study is not. It is held that probably either may be cause or effect. As the classroom teacher observes a child whose reading ability is low and whose self-concept is poor, he should be primarily concerned with remediation of both; cause and effect are pertinent,
but cure is paramount. Neither is this research concerned with the multi-faceted aspect of personality or with the ways in which personality disorders express themselves, except as the self-concept, as esteemed or not esteemed, relates to personality. It was believed that personal needs, as representative of self-esteem in the concept of self, provided channels through which a teacher of reading might travel toward some success.

Why does reading cause so much trouble? "Reading is the most personal and least structured of the forms of communication which depend on printed symbols ... it symbolizes growing up in our society." McKillop pointed out that nobody ever learned to read without taking a chance--on a word, for example. Yet, to some children, this might be dangerous; one could be wrong, and being wrong could be bad. The complex perceptual task of reading requires the ability to think abstractly--it must be learned--but, also, reading is interpersonal. It is a form of communication which may fail because the individual may not know the language or does not want to communicate. He may not want to communicate if he is fearful or angry;


54 Ibid.
he may be fearful if he thinks he is no good—if he thinks he cannot do this difficult thing—cannot learn to read.

"A child said, 'It feels bad inside.' How can we expect him to break a word into syllables, sound out each part, or use a context clue if his energies are tied up in feeling bad?"

McKillop concluded that a child's reading is as truly an expression of all that he is as his way of walking or talking, as his interests or friendships.

Strang gave the opinion that to fail in reading is to fail in one of the child's most important developmental tasks as many parents and teachers see it. Sensing this, the child becomes insecure, anxious, and tense, conditions that further defeat his attempt to read. Of central importance in serious reading cases is the way in which the individual regards himself. Repeated experiences of failure accompanied by disparaging comments from other people help create the negative self-concept so often found among poor readers. Self-concepts are learned. They are built up in many subtle ways; they derive in part from negative comments of parents, teachers, and friends and from repeated experiences of

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55Ibid., p. 122.
56Ibid., p. 123.
failure. Self-confidence is reinforced by experiences of success. By helping students to change their self-concepts, one can help them change their ways. Strang warned, however, that this is easier said than done, as the self-concept is deep-rooted. Emphasis was given to the fact that classroom teachers should be equipped to bring to each individual case background knowledge of complex causation of reading difficulties, the dynamics of behavior, the psychology of learning, and the best methods and materials essential to the teaching of reading.

One of the earliest studies concerned with the relation of reading and personality was that of Hincks. She studied children of normal ability who apparently were unable to learn to read; conclusions were that a vicious cycle arose when the reading difficulty added to the tension and nervousness of the child which further inhibited the learning process. All of this became a source of irritation to parents so that a general family and school maladjustment occurred.

In contemporary thought, Tarjan agreed that personal interaction between the child, his parents, and other significant adults is so complex, so pertinent in its effect

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upon children, that no personality evaluation could be considered complete without accounting for the intricacies of these relationships. He further indicated two inconsistencies about the schools in relation to personality development. It is said on the one hand that a child who does the best of which he is capable is entitled to a feeling of adequacy and success, but on the other hand, the teachers are judged through the achievement of pupils measured along standardized scales. It is also stated on the one hand that the primary obligation of the school is the teaching of subject matter, but insistence is made that the teacher mold the students toward a preconceived prototype of the good citizen even though many of the basic personality traits needed for success have been determined in the home prior to entry in the school.

Gann made a careful study of poor readers, average readers, and superior readers to determine whether there were real differences in the personalities of retarded readers as compared with personalities of successful readers. Thirty-four poor readers were matched with the same number


of average and superior readers. The children were from varied school situations. The three groups were given intelligence tests, reading tests, and personality tests (the Rorschach was one measure) in order to determine whether the personality of the poor reader did not function in a less harmonious and comfortable manner, to determine whether the poor reader did not feel less confident about himself and his abilities, and to determine whether he did not feel insecure in relation to people. She concluded that poor readers were emotionally less well-adjusted and less stable, that they were insecure and fearful in relation to emotionally challenging situations, and that they were socially less adaptable in relation to groups. Gann indicated that consideration of reading difficulty cannot be made apart from personality adjustment and attitudes toward the reading experience.

Solomon used the Rorschach Test as a measure to determine its value in investigating personality adjustment in relation to success and failure in reading.61 She emphasized that her study included two factors which differentiated it from previous ones: The use of the Rorschach

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to evaluate basic personality adjustment in terms of dynamic structure and in terms of time relationship with regard to reading experience; and the use of the technique in a test-retest pattern to afford opportunity for investigating the nature of change concomitant with success or failure in reading. The subjects were a group of children who entered the Laboratory School of the University of Chicago in October, 1948. This is an atypical school in that the majority of fathers of the children in the school are in the professions or are successful businessmen; the median intelligence quotient of the subjects was 132.7. The children were given the Rorschach Test shortly after beginning school and again in October, 1950, two years later, in order to appraise personality adjustment of the children early in first grade before they had any formal reading experience and again at the beginning of the third grade when their level of reading achievement could also be determined. Pupils were characterized as successful or unsuccessful readers on the basis of their performance on the Chicago Reading Test, which is always administered at the beginning of third grade. Nine boys and two girls were classified as unsuccessful readers. The conclusions were interesting: Both successful and unsuccessful readers tended to be highly responsive to their environment; the reaction of the successful group tended to be more impulsive and less mature than
that of the unsuccessful group. The successful readers as a group perceived their environments with a somewhat higher degree of accuracy than did unsuccessful readers. The unsuccessful readers, especially the boys, gave more attention to minute, unimportant details than did successful readers. The unsuccessful readers showed less feelings of inadequacy and anxiety than did the successful readers. The successful boys tended to be somewhat more introverted than did the unsuccessful boys, while the successful girls were described as well-adjusted emotionally and intellectually. As to whether or not the technique showed a change in personality factors accompanying lack of success in reading, it was found that although the capacity for mature, interpersonal relations was retained, there was a marked increase in the quantity of affective energy and capacity for environmental contact in the area of immature and impulsive emotional reactions. In judging the technique as a predictor of reading difficulty, Solomon stated that there was some implication in the fact that the intellectual approach of the potentially unsuccessful reader indicated preoccupation with unimportant details and perceptual inaccuracy. In noting the conclusion that the successful readers showed greater feelings of anxiety and inadequacy than did the unsuccessful readers, the study contained two serious drawbacks which
should be noted. First, this was not a typical school situation, and second, limitations were placed upon the study by the fact that these children had completed only two years of education. Solomon stated that the beginning of grade three was chosen, among other reasons, because the second and third grades have been characterized by Gray as a period of rapid growth in fundamental attitudes and habits of reading. Had testing been done at the end of grade three rather than at the end of grade two, results might well have been different. The statement that lack of success in reading accompanied affective energy increase in the area of immature and impulsive emotional reactions indicated to the writer that difficulties might have compounded as the unsuccessful reader progressed through school.

Homze drew an interesting hypothesis between the effects of reading and the self-concept. She cited five general areas in which reading has an effect: The instructional effect, the prestige effect, the aesthetic effect, the respite effect (results from reading that relieves tension), and the reinforcement effect (results from reading that reinforces one's attitudes). Books aid pupils' under-

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62 Ibid., p. 68.
63 Alma Cross Homze, "Reading and the Self-Concept," Elementary English, XXXIX (March, 1962), 212.
standing of themselves and their personal environment, comprehension of social problems and issues, and finding escape or entertainment. The effect of books depends upon the age, sex, education, income level, and group membership of a person. For most children, group membership is most important. The self-concept, Homze defined as, "The person as known to himself, particularly stable, important, and typical aspects of himself as he perceives them." The social forces which act on children and help them form their self-concepts are widely varied. The first form of communication for the child is through empathy. When language develops, the child has a more precise form of communicating. As he begins to recognize others and accept them, he begins to recognize the power of others and his position with other people becomes clearer. His self-concept has evolved from the time when he was alone most of the time to the period when he identified as a person through his beginning socialization; when he reaches school age, the development of his self-concept is as dependent on social contacts as on language development. The actions of peers determine much of the behavior he assumes, and the ability to identify with others is an important factor in the development of self-concept. The actions which he assumes that are satisfying and rewarding.

64 Ibid.
developing a child's attitude toward himself as a reader as well as developing reading skills, and such programs should include many successful reading experiences to help build the child's confidence.66

Lumpkin examined the relationship between the self-concept and achievement in reading.67 Twenty-five over-achievers and twenty-five underachievers were matched on the basis of chronological age, mental age, sex, and home background. Comparisons were made on the basis of a variety of instruments designed to explore self-concept, teacher perception of the child, and peer relationships. It was found that there were significant relationships between self-concept and achievement in reading. The over-achievers revealed more positive self-concepts, higher levels of adjustment, and saw themselves as liking reading; they were viewed positively by both teachers and peers.

The underachievers in reading had significantly lower scores in all areas of academic achievement, they manifested a predominantly negative perception of self and a desire to be different from the self as seen, and expressed, to a statistically significant extent, feelings of conflict more frequently. They were viewed by teachers as manifesting

66Ibid., 213-15.

high problem frequency. Lumpkin concluded that achievement stems from intrinsic motivation as well as from environmental responses to the achievement, and that the life experiences of the underachievers have contributed to negative feelings concerning themselves, and their world, which are manifested in lack of achievement.

Roth studied three reading improvement classes for freshmen at the University of Texas to test the hypothesis that there were significant differences among self-perceptions of Improvers, Non-Improvers, and Drop-Outs. The subjects found themselves in a situation which pressured them to change; the kind of change required was one from within. This condition produced a force upon the individual about which he was expected to do something. How open he was to the experience determined how he perceived the situation. If he saw it as a threat, he could change his self-concept commensurate with and including the new experience. Roth agreed with the theory of self as posited by Rogers:

Any value entering this system of organization of self-valuation which is inconsistent with the individual's valuation of himself cannot be assimilated; it meets with resistance and is likely, unless the general reorganization occurs, to be rejected.69


69 Ibid., p. 265.
Students were compared on academic aptitude, The American Council on Education Psychological Examination, a diagnostic reading test, and a sentence completion technique which measured various aspects of the self-concept. Roth hypothesized that since this program pressured the individual to change, he would either be open to the situation and change, or he could avoid meeting the demand by either distorting his perception of the situation or by denying it entirely. According to the Rogerian self-theory, he would deny or distort the experience as a defense against inconsistency with self-concept. He would consider it more important to maintain a conception of self than to integrate experiences which might necessitate changing the concept. This condition occurs when the self-concept is used as a defense against threats. The theory thus proposed was that with all other factors equal, those who did something constructive from the experience would demonstrate less defensiveness in their concept of self as a reader than those who did not do as well. If an individual's concept of self as a reader were defensive, it would be an expression of a more permeating defense system which would be manifested in concepts other than reading. The hypothesis was confirmed. The data in the study clearly indicated that not only is the self-concept related to
achievement, but that in terms of conception of self, individuals have a definite investment to perform as they do. 70

In an attempt to determine whether a personality pattern exists which is common to successful readers, Keshian selected by random sample seventy-two fifth grade children from over four-hundred successful readers. 71 Boys and girls were represented in equal numbers and were equally distributed in the low, average, and superior intelligence ranges. Case studies were made of each, including parent interviews, questionnaires for each of the children, data from the teachers, the Stanford Reading Test, Iowa SRT Aspects of Personality, and the California Test of Personality. The correlation between the scores on tests of personality and reading was .40; however, one should bear in mind that only successful readers were included. The study indicated that reading success did not seem to be the result of any single factor such as personality or intelligence. Rather, it was demonstrated that success in reading was the result of a combination of factors, one of which is an integrated personality. No single personality type or

70 Ibid., pp. 265-81.
pattern emerged as being common to successful readers. Keshian concluded that group tests of personality do not discriminate sufficiently between various levels of personal adjustment to enable one to assess personality with a high degree of accuracy, but that what one was able to do with some confidence, was to distinguish between the child with personality problems and the child who is relatively free of problems, as were the children in this investigation.

The difficulty of assessing aspects of personality and adjustment was recognized at Boston University, and research was conducted to develop an instrument for measuring the children's adjustment in the classroom and the relationship of achievement and adjustment. It consisted of a teacher's check list, a rating scale to be completed by the parent, and a pupil interview to be completed by the teacher. It was considered workable and reliable. Eldridge used the instrument with children in sixteen classrooms, analyzed the results, and reorganized the scale in relation to her findings. The children's interview was abandoned as not useful. Atwood compared achievement and scores on the adjustment scale and reported a relationship when the whole scale was used, but it was not significant.

72 Durrell, op. cit., p. 28.
73 Ibid.
Black studied the relationship of the adjustment scale and the California Test of Personality in grades one, two, and three; it was found that the instruments appeared to measure different functions.\textsuperscript{74}

Of all the various causes of underachievement, feelings which block learning are the most difficult for the teacher to comprehend or measure. Hollister and Chandler indicated that one of the best ways for a teacher to understand what such a child experiences is for the teacher to relive the memory of some of the normal experiences all have had with emotions—"those moments when 'words failed me' are instances of being emotionally blocked."\textsuperscript{75} Most teachers have experienced anxiety before a speech, a test, or on the first day before a class. Thus, it should be easier to sense the mounting panic some children feel when it becomes their turn to recite.\textsuperscript{76}

Perhaps the key to successful teacher management of most of these emotional blocks which cause underachievement lies in the teacher's sensitivity to the child's unmet emotional needs and in her ability to mobilize emotionally satisfying and rewarding classroom

\textsuperscript{74}Ibid.


\textsuperscript{76}Ibid.
experiences. . . . We have needs for recognition, the satisfaction of being able really to achieve, and a need to feel psychologically safe or secure. These basic emotional needs also operate in all the children we teach. If these needs are well met, the child develops the poise, security, and ability to use his intellectual endowment. If these needs are unmet, either through acute loss or chronic deprivation, the child becomes insecure and anxious, loses his self-respect and his willingness to give of himself, and gradually becomes so concerned with self that little free energy is available to invest in learning. 77

The Harvard researchers reported that schools have long been concerned with academic underachievement. 78 They suggested that the child who is performing consistently below the level of his potentiality is inevitably influencing the development of his own self-concept, his peer group status, and his future behavioral role as an adult. Attitudes toward school as a phase of one's life experience and toward life in a broader sense are greatly affected by the success or failure, the sense of achievement or frustration in the field of reading. "The child who fails to perform on a level commensurate with his ability is deprived not only in his present satisfaction but also in his ultimate adjustment in adult life." 79

77Ibid., 19.
78Austin and Morrison, op. cit., p. 15.
79Ibid.
IV. SUMMARY

In reviewing the related literature and research relevant to this study, several underlying themes became apparent. One was that a new concept of achievement must become understood by teachers and be used by them; the old grade level standard of achievement must be rejected. Another recurring theme was the widespread underachievement of bright children, and the need for classroom teachers to do something immediately to remedy this; studies repeatedly brought out the fact that most underachievers are capable students. A third theme throughout most of the literature was that classroom teachers will not be able to improve achievement unless they learn to individualize their instruction according to the needs of the individual child. A fourth theme which appeared frequently in the literature concerned the need to eliminate rigid grade level requirements, standards, and measures. As Strickland wrote:

Perhaps the points some will give up are of the same books for all children at the same time, the same time schedule, the same methods of teaching, the same course of study with the same arrangement and pacing of work and the same yardstick to measure children by at the same time of year to put records on the same report cards for all.80

The purpose of this chapter was to present a comprehensive coverage of the literature and research in the areas of reading achievement and the self-concept. That reading underachievement exists is accepted; that it needs to be reduced is confirmed. That reading underachievement is related to self-concept is accepted; that there is a cohesive interrelationship between the two remains to be confirmed—if indeed, confirmation can ever be realized.
CHAPTER III

METHOD OF PROCEDURE AND TREATMENT OF FINDINGS

The working hypothesis upon which the study was based postulated that a psychological approach to the teaching of reading would be successful with problem readers and that such an approach would not only result in improved reading achievement, but also in improved achievement in the content areas and in an increase in the self-esteem of the problem readers. A psychological approach was defined as one which encompassed more than recognition of individual differences; this type of program required understanding and attempted fulfillment of a child's personal needs as well as his academic needs. This portion of the paper is concerned with that part of the study in which the hypothesis was treated. Treated are: (1) selection of subjects and the experimental group; (2) materials used; (3) the program; (4) statistical treatment of the data; and (5) changes which occurred.

I. SELECTION OF SUBJECTS AND DESCRIPTION OF THE STUDY

The elementary school at which the study was conducted is located in a midwestern city of about 75,000 population and serves children from homes which range from low class to middle class. Some of the children attending the school
were from deprived homes; however, the majority came from homes in the lower to lower-middle class range. The heterogeneous sixth grade class which contained the problem readers consisted of forty children with an age range of 10.10 years to 13.5 years at the beginning of the school year, a reading range of 3.4 to 9.4 as determined by the test instrument used, and an intelligence quotient range of 66 to 140 as determined by the test instrument used. Interestingly enough, both the youngest child and the oldest child in the group were found to be problem readers, as was the child with the highest intelligence quotient.

Selection of the Subjects

A complete description of the test instruments used to measure intelligence, grade expectancy, reading achievement, readiness for reading instruction, and content achievement is contained in Appendix A. At the completion of testing, a grade expectancy score, a reading achievement score, an intelligence quotient, and a readiness profile were available for each child in the class.

**Experimental group.** A problem reader was considered to be that individual whose actual reading achievement was one or more years below his grade expectancy. Since the assumption concerned children with average or above-average ability, the lower limit for intelligence quotient for the test group was set at 87. Ten children, eight boys and two girls, were found to be problem readers; data on the ability, expectancy, and achievement are summarized in Table I. As can be noted from Table I, the intelligence quotient range was from 87 to 140; the age range was from 10.10 years to 13.5 years; the reading achievement range was from 3.4 to 7.2; the expectancy range was from 5.9 to 10.1; actual achievement in the social studies ranged from 4.2 to 10.0.

As reported, it was the belief that low reading achievement by a child with average or above-average ability was a psychological problem, unique to the individual. As one examines the backgrounds of the problem readers, the hypothesis would seem to be justified. The only common denominators within the group were their lack of successful achievement and their need for self-confidence. Pertinent to this study, there were no common factors in cultural background or in environment excepting attendance at the same school and being taught by the same teacher. As one examined factors felt by some educators to be related significantly to reading achievement, it was found that there were no common
TABLE I
DATA ON PROBLEM READERS, OCTOBER, 1963

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<td>5.1</td>
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</table>
factors here, either, which substantiated more comprehensive studies. Three problem readers were from broken homes; seven were not. Four problem readers had been admitted by transfer to the school in question; six had received all of their education at the same school. Two children had experienced non-promotion; eight had not. No housing conditions were considered inferior. Only one of the ten problem readers could have been considered a premature school entry; his entrance age for kindergarten was 4.10 years. The question then remained: Why had these children become problem readers when thirty of the forty children in the group had been able to achieve comfortably?

Due to the lack of homogeneity within this small group of ten children, it became necessary for the teacher to use an almost completely individualized approach; indeed, due to the almost complete lack of homogeneity within the class as a whole, a combination of the controlled basal program and an individualized approach was felt to be that most apt to succeed. Whether children are assembled on a heterogeneous basis or a so-called homogeneous basis, differences will exist despite all efforts to achieve homogeneity in any given class. It has been recommended that flexibility in

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reading instruction be maintained to allow for individual differences, regardless of the make-up of the class.\textsuperscript{3}

\textbf{Materials Used}

No materials other than those usually supplied to the elementary classroom were used for this study, with one exception which will be later noted.

\textbf{Basal program.} Since all children in the class group had been "through" the Ginn basal reader for fifth grade, it was felt to be necessary to use the Ginn basal reader for sixth grade, \textit{Wings to Adventure}, for all the children. It was understood that this was not according to recommendations by experts in the field of reading, who find that better learning takes place when the child reads in a basal reader prepared for his level of achievement.\textsuperscript{4} The accompanying workbook, \textit{My Do and Learn Book}, was also used by all the children in the class.

\textbf{Library materials.} During the first two months of the study, a small classroom library of approximately 150 volumes was available; during the latter two months of


\textsuperscript{4}Ibid., p. 229.
the study, the students had access to a new central school library. During the two intervening months, all library books in the school were being processed and were not available. Bookmobile service was supplied the school one day every third week by the public library. In addition, the classroom teacher borrowed from the public library approximately twenty-five books every two weeks, which provided approximately 300 additional books for the children to read. By doing this, the teacher was able to insure that appropriate reading material was available for all of the pupils. This was an exception to the usual provision for classroom reading material.

**Current events materials.** During the first semester of the school year, My Weekly Reader was read for current events; however, its use was discontinued during the second semester inasmuch as it was felt that the issue for sixth grade did not fit the wide reading range of the group. Current events were read in the daily newspaper and World Events, published by Silver-Burdett in cooperation with Time and Life, and were discussed in the classroom through presentations by different group leaders.

**Materials for accelerated readers.** For the eight children in the class who were accelerated in reading, several sets of challenging trade books, both classic and
contemporary, were available through the Vigo County Resource Library.

The Program as Dictated by a Psychological Approach

The program varied as the children varied; however, there were certain fundamentals basic to the entire approach.

Basic fundamentals. Basic to a psychological approach in the teaching of reading was that all children, regardless of ability or achievement, must feel that they were contributing members of the group. Fundamental to such an approach was a controlled permissiveness in the classroom; an aura of freedom was necessary, however, this had to be a freedom in which individual goals had been established and were pursued by the children and the teacher. Realizing that tension blocks learning, an effort was made to remove tension in the reading situation; it was understood by all of the children that mistakes were a part of learning and were never to be considered sources of discomfort or merriment. Basic to this type of approach was the understanding by the teacher of the individual, and the knowledge that, although one might teach a group, individuals

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learned--individuals who brought to school with them their hopes or fears, their happiness or misery, and a self-concept which embodied many facets.

Understanding a child as completely as it was possible for the researcher to do under existing circumstances, realizing that self-esteem might be low and recognizing that through lack of reading ability a self-concept might suffer, it was felt that a sensitive teacher might actually reach the child through his needs for recognition as an individual of worth. By bolstering the child's confidence through providing tasks in which success, with some effort, was assured, one step was taken. By giving the child a trustworthy task to which he proved worthy, another step was taken. By combining those steps toward an improvement in self-confidence with accompanying steps forward in reading skills, it was believed that the child would eventually proceed at a faster pace. By combining progressively more difficult goals--always the teacher had to insure success--with recognition of achievement, however slight, it was felt that a teacher should be able to reach a child through his needs.

Fundamental to this type of approach was a clear-cut understanding of skills achieved and those which remained to be learned. Through item analysis of the readiness test, the teacher was able to learn what skills most needed emphasis for each child. Follow-up lessons were planned
with this in mind. Oral reading was checked at frequent intervals for rate, word analysis, and comprehension. Frankness and honesty with the problem reader were considered essential.

Also considered to be of fundamental concern to this type of approach was the concept of transfer in learning. It would seem that problem readers were not as capable in transferring what was learned as part of a reading lesson to an actual situation in which the learned concept was needed. Problem readers must be shown many, many times that, for example, a method for unlocking the meaning of a word works not only in a basal reader situation, but also in a trade book, a magazine, a history text, or in My Weekly Reader as well.

Application to personal needs. In attempting to understand the children, observation of them at play was most revealing. Here it was that bits of conversation were most revealing. Here it was that the bully emerged, as well as the isolate. Here it was that leadership in the group was defined, as well as followership. Observations of the problem readers on the playground and on their way to and from school were considered to be most helpful to the teacher in understanding the children. Conferences with parents were of even more benefit.
What were the needs of the ten problem readers which emerged through observation and conferencing? Overheard was this comment: "I can't read and I never could. I'll never amount to much." A need certainly existed here. This comment from a mother: "The boy's father doesn't take any time with him. He prefers his older brother and baby sister." A need surely existed here. It was learned through conference that the mother of one problem reader had suffered a nervous breakdown and was hospitalized for several months. It is doubtful if any school situation could have met the need of this child. Some were not so complex. The simple need to read well enough to try out for the lead in Doris Gates' Blue Willow was easier to meet. One problem reader was heard to remark that he had never, "in all his years at school," been chosen as a squad leader in physical education; an easy need to meet. One might wonder about the self-esteem of the problem reader with the intelligence quotient of 140. Actually, his confidence appeared good, but he too had personal needs. One was for recognition by the teacher of his superior ability even in the face of inferior work. He also had not one friend. Previously placed with an average ability group on the basis of accomplishment in the classroom, he had responded with an over-bearing, belligerent attitude—a climate in which friendship did not flourish.
Needs could be met at odd moments or at planned moments. How did one judge success? One way was through observations such as: when the child who "just couldn't read" started to appear at the teacher's elbow many times during the day asking, "Is this word ______?"; when all ten problem readers tried out for parts in a radio play, without the suggestion coming from the teacher; when one member of the therapy group complained because it was not able to meet one week; and when some of the problem readers started to volunteer to do research reading for reports on weekly programs, indications were to the teacher that problem readers were improving.

**Application to reading needs.** In addition to use of the developmental program and a free reading program, various techniques were used, some involving groups and some involving individuals. Often small groups were formed to teach or reinforce a particular skill, then disbanded when the skill was learned.

The problem reader with the highest intelligence quotient was placed with the group of accelerated readers, purely on the basis of ability. Emphasis in this group was on critical and creative reading. They pursued the basal program, working as individuals on weak skills, plus an individualized reading program, plus a controlled learning
situation involving the use of trade books. As an example, Leighton Barrett's adaptation of *The Adventures of Don Quixote* by Cervantes was read for the specific objectives of appreciation of style in literary expression, mood, and sheer enjoyment of this well-told tale. Challenge seemed to be what this particular problem reader needed, and he responded readily.

One child was given the assignment to read orally kindergarten level books and stories at home to her younger brother. Her mother was very cooperative, and that problem reader was given credit for her work at home.

For some of the more capable problem readers, the assignment to become an expert and discussion leader for *World Events* worked well.

One of the mechanical techniques considered helpful was a large chart made to fit the teacher's desk blotter which provided a block for each child in which were noted reading skills that needed emphasis. By having information always close at hand, the teacher was able to individualize much teaching, not only during the reading period but when working in the content areas as well. When an opportunity arose for application of a reading skill, it was a simple matter to check the chart for those students who most needed reinforcement of the particular skill. Application of reading skills was taught in the content areas, and emphasis was
placed on the particular propensity of a subject for a skill, i.e. contextual clues and diacritical markings in the social studies, reading for facts in arithmetic, and note-taking in science.

A reading therapy group met each week. This group was composed of six problem readers and four children who were low achievers but not underachievers. The group meetings had three purposes: To provide a diagnostic situation for the teacher, to provide extra, immediate instruction which the children needed, and to provide a therapeutic situation in which the children felt free to make mistakes, discuss these mistakes, and thus to learn. At the beginning, it took some time for the classroom teacher to create a climate in which these poor readers felt free to participate fully. The teacher attempted to make this an enjoyable, stimulating experience in which tensions, which usually accompanied the reading situation for these children, were eliminated. Jokes usually initiated the sessions. Each child had previously prepared a short selection to be read orally to the group. At the completion of the oral reading, the others in the group who were listening as the material was read orally asked the reader a thought or fact question about the material. In order to answer these questions, the reader might have to skim, tell the main idea, remember or check sequence, or summarize. Kind honesty about skills incor-
rectly used, not used fully, or never learned was necessary. It became a mutually reciprocal situation in which the children felt free to help each other.

Individually oriented assignments and tasks, emphasis placed on individual skill needs, effective use of a controlled developmental program, spontaneous enjoyment of individualized reading—these were major components of the approach used; an approach, however, which was permeated with the idea of meeting personal needs of the individual first. Through all situations in which reading was taught, the psychological approach which concerned itself with meeting the individual's needs, both academic and personal, was all-pervasive.

II. STATISTICAL TREATMENT OF DATA

On May 1, 1964, the class group of thirty-seven children was retested with Form A of the S.R.A. Reading Achievement Test. Three of the original forty children had withdrawn from the school during the second semester, and before statistics were computed, their test data were removed from group data for the first test. The results of the S.R.A. test, rather than the results of the Metropolitan test referred to in Table I, page 58, were treated by statistical analysis since this was the test specifically selected for use in this study.
Treatment of Group Data

Table III, Appendix B, contains the raw scores from which statistics were computed. Table IV, Appendix B, shows that the scores on Test A ranged from 85 to 22; on Test B they ranged from 99 to 32. The range for Test A was 63; for Test B it was 67. The mean of Test A was 53.32; for Test B it was 61.46. The mode for Test A was 66.00; for Test B it was 84.00. The median for Test A was 56.00; for Test B it was 61.00. The standard deviation for Test A was 15.83; for Test B it was 19.05. The first quartile for Test A was 39.58; for Test B it was 47.75. The third quartile for Test A was 64.25; for Test B it was 73.25. The standard error of the mean for Test A was 3.13; for Test B it was 2.60. A t score was computed as 2.417. A rank order correlation was computed; although this was done primarily as a step in determining a t score, it will be noted in Table IV that this correlation was .81. In addition to its use in computing the t score, it may be stated that this coefficient of correlation indicated a satisfactory degree of consistency between the two tests.

Treatment of Individual Data for Problem Readers

Comparisons were made of all data available on the problem readers including the following calculations for the S.R.A. Achievement Test: total score, rank in class,
z score, percentile rank, and grade level achievements in both comprehension and vocabulary. Comparisons were made between achievements in reading, social studies information and skills, and science as obtained through use of the Metropolitan Achievement Tests. The composite results of the May tests are shown in Table II. As can be noted from Table II, the May reading range was from 3.9 to 9.2, as obtained from scores on the S.R.A. tests; the reading range as shown by the Metropolitan tests was from 3.8 to 10.0; the expectancy range was from 5.9 to 10.7; the actual achievement in science ranged from 5.1 to 10.0; and the actual achievement in the social studies ranged from 5.1 to 10.0. The age range in May was from 11.4 to 13.11.

Since individualization was a crucial element in this study, each pupil is discussed individually. Tables presenting the data on the individual pupils are to be found in Appendix B; reference is made to these tables in the case study discussions of each pupil. Through employment of the individual case study method, change or lack of change by problem readers became readily apparent.

Case Study: Problem Reader No. I

As shown in Table V, Appendix B, this boy, with intelligence quotient of 140, grade expectancy of 10.7,
TABLE II
DATA ON PROBLEM READERS, MAY, 1964

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<td>#1 Boy</td>
<td>140</td>
<td>11.11</td>
<td>9.2</td>
<td>10.7</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
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<tr>
<td>#2 Boy</td>
<td>131</td>
<td>11.11</td>
<td>6.4</td>
<td>9.5</td>
<td>10.0</td>
<td>10.0</td>
<td>8.4</td>
</tr>
<tr>
<td>#3 Boy</td>
<td>121</td>
<td>11.4</td>
<td>5.7</td>
<td>7.8</td>
<td>9.1</td>
<td>9.1</td>
<td>7.1</td>
</tr>
<tr>
<td>#4 Boy</td>
<td>117</td>
<td>12.2</td>
<td>9.8</td>
<td>8.6</td>
<td>10.0</td>
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<td>#5 Girl</td>
<td>108</td>
<td>11.8</td>
<td>5.1</td>
<td>6.9</td>
<td>7.3</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
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<td>107</td>
<td>11.11</td>
<td>6.6</td>
<td>7.4</td>
<td>8.7</td>
<td>8.4</td>
<td>6.8</td>
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<td>#7 Boy</td>
<td>103</td>
<td>12.0</td>
<td>4.8</td>
<td>6.9</td>
<td>7.0</td>
<td>5.5</td>
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<tr>
<td>#8 Girl</td>
<td>92</td>
<td>12.7</td>
<td>4.7</td>
<td>5.6</td>
<td>5.1</td>
<td>5.1</td>
<td>4.2</td>
</tr>
<tr>
<td>#9 Boy</td>
<td>87</td>
<td>13.1</td>
<td>3.9</td>
<td>5.9</td>
<td>6.3</td>
<td>4.8</td>
<td>3.8</td>
</tr>
<tr>
<td>#10 Boy</td>
<td>87</td>
<td>13.11</td>
<td>4.2</td>
<td>5.9</td>
<td>5.2</td>
<td>5.4</td>
<td>5.5</td>
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</table>
and actual reading achievement of 7.2 as measured by the S.R.A. Reading Achievement Test in October, gained two full years in reading achievement. The grade level increase for comprehension was 1.3 and for vocabulary 2.7.

Since the Metropolitan Achievement Battery scored only as high as 10.0+, no gains in social studies and science could be statistically noted.

Self-esteem and self-confidence, according to observation, were felt to be more nearly true expressions of this problem reader's self-concept at the conclusion of the study than at the beginning. This boy apparently has less need for belligerence, since he has been able to achieve for himself an accepted place in the group. Thus, the self-confidence this individual displays now may be considered more nearly true confidence in self than the bombastic attitude of confidence displayed at the beginning of the year.

It is the opinion of the researcher that the psychological approach may be considered to have been successful with Problem Reader No. I.

Case Study: Problem Reader No. II

Table VI, Appendix B, shows that this boy, with intelligence quotient of 131, grade expectancy of 9.5, and actual reading achievement as measured in October of 6.3, was able to achieve only 6.4 on the re-test.
Achievement increase on the Metropolitan Battery, however, was notable. Reading achievement increased 1.8 years; social studies information achievement increased 5.7 years; social studies skills increased 1.2 years; and science achievement increased 4.0 years.

Teacher observation in regard to self-esteem of this problem reader led to the conclusion that there had been a marked increase in confidence and esteem of self by this boy as displayed through his volunteering in discussions, his attitude toward self and others, his increased leadership in activities both in the classroom and on the playground, and his marked improvement in the quality of his school work.

Nevertheless, even though there was a marked increase in general achievement and in self-esteem, since there was no statistically verified change in reading achievement as measured by the S.R.A. test, it cannot be stated that the psychological approach was successful with Problem Reader No.II.

Case Study: Problem Reader No.III

Table VII, Appendix B, shows that this boy, with intelligence quotient of 121, grade expectancy of 7.8, and actual reading achievement as measured by the S.R.A. Reading Achievement Test in October of 5.3, achieved only 5.7 on
There was an increase in achievement as measured by the Metropolitan Achievement Test: Reading achievement increased 1.6 years, social studies information increased 3.9 years, social studies skills achievement increased 3.9 years, and science achievement increased 2.5 years.

The classroom teacher believed that this problem reader reacted only slightly, if at all, to the psychological approach. She was not able to detect any increase in self-esteem or change in attitudes toward school or self. Since there was also no significant gain in reading achievement as measured by the S.R.A. test, it was the opinion of the teacher that a psychological approach to teaching reading to this problem reader could not be considered successful.

Case Study: Problem Reader No. IV

Table VIII, Appendix B, shows that this boy, with intelligence quotient of 117, grade expectancy of 8.6, and actual reading achievement as measured by the S.R.A. Reading Achievement Test in October of 6.5 actually achieved 9.8 on the re-test.

Since the Metropolitan Achievement Battery scored only as high as 10.0+, the only change in achievement in content areas which could be noted was an increase of 3.4 years in
social studies information.

Self-esteem and self-confidence, according to teacher observation, showed a marked increase as demonstrated by the boy's acceptance of and successful performance in the role of a leader which the class bestowed upon him.

Thus, since there was a significant increase in reading achievement, social studies achievement, and self-esteem, it can be stated that a psychological approach was successful with Problem Reader No. IV.

Case Study: Problem Reader No. V

Table IX, see Appendix B, shows that this girl, with intelligence quotient of 108, grade expectancy of 6.9, and actual reading achievement as measured by the S.R.A. Reading Achievement Test in October of 4.8, gained only three months in achievement as measured by the re-test.

There was an increase in achievement in reading of 1.9 years, in social studies information of 2.2 years, in social studies skills of 1.8 years, and in science of 1.1 years as measured by the Metropolitan Battery.

The teacher observed a definite increase of self-esteem in this girl who had stated at the beginning of the year that she would never amount to anything. She was able to perform duties as a leader successfully; she participated in discussions and in volunteer work; she made more friends and exhibited a more outgoing personality.
She became a capable oral reader.

Even though there was an increase in achievement and in self-esteem, since the increase in reading achievement as statistically verified was slight, it cannot be stated that the psychological approach was successful with Problem Reader No. V.

Case Study: Problem Reader No. VI

Table X, Appendix B, shows that this boy, with an intelligence quotient of 107, grade expectancy of 7.4, and an October reading achievement measured at 5.5, achieved 6.6 on the re-test.

Achievement on the Metropolitan Battery consisted of no gain in reading (6.3), a 2 months' gain in social studies information, a 2.9 years gain in social studies skills and a 3 months' gain in science.

There was some increase in self-esteem as observed by the classroom teacher and as demonstrated through participation in class activities, more friendships, and increased participation in activities in the classroom which required leadership.

Since the S.R.A. test-retest pattern showed a gain in grade level comprehension of 1.2 years and in grade level vocabulary of 1.1 years plus a total over-all score increase of from 48 to 61, it was felt that it was substantiated that this problem reader had been helped through a psychological approach.
Case Study: Problem Reader No. VII

Table XI, Appendix B, shows that this boy, with intelligence quotient of 103, grade expectancy of 6.9, and actual reading achievement of 4.8 as measured by the S.R.A. Reading Achievement Test in October, achieved an achievement of 4.8 on the re-test.

There was an increase in achievement of reading by 4 months, of social studies information by 1.4 years, of social studies skills by 2.1 years, and of science by 4 months as measured by the Metropolitan Battery.

The increase in this boy’s self-esteem was remarkable. As his reading improved, he read his first library book which led to many more; he enjoyed giving oral reports. He has become a popular boy with the other students and is often chosen by them for positions of leadership. He is a slow worker, which lowered his achievement on all tests; what he was able to finish was well done. He has confidence, now, in his ability to do things well.

Although the composite achievement remained the same, there was an increase in reading comprehension of 1.3 as shown by the re-test; however, even though there was significant increase in social studies achievement and self-esteem, it cannot be stated definitely that a psychological approach was completely successful with Problem Reader No. VII.
Case Study: Problem Reader No. VIII

Table XII, Appendix B, shows that this girl, with intelligence quotient of 92, with grade expectancy of 5.6, and an actual reading achievement as measured by the S.R.A. Reading Achievement Test in October of 3.9, achieved a 4.75 grade level on the re-test.

The only gain measured by the Metropolitan Battery was a 2.2 increase in achievement in social studies information.

This problem reader showed some slight increase in self-esteem; the classroom teacher observed that this individual was the last child to show any results, either in change in self-esteem or reading achievement; however, improvement has been noted each day recently. She is liked by her classmates and has recently developed a less shy, more outgoing personality.

Although there was little change exhibited by this subject in terms of the measurement used, it was felt that the increase in reading comprehension of 1.9 years as shown by the test-retest pattern was significantly great enough to give merit to the statement that the psychological approach to the teaching of reading to this problem reader met with some success.

Case Study: Problem Reader No. IX

Table XIII, Appendix B, shows that this boy, with
intelligence quotient of 87, grade expectancy of 5.9 and an actual reading achievement as measured by the S.R.A. Reading Achievement Test in October of 4.7, measured 4.2 on the re-test.

The Metropolitan Achievement Tests showed an increase of achievement in reading of 6 months, in social studies information of 1.7 years, and in science of 3 months.

As nearly as the classroom teacher could observe, there was no change in self-esteem or in any other aspect of this boy's personality during the course of the study.

The psychological approach was not considered successful with Problem Reader No. IX.

Case Study: Problem Reader No. X

Table XIV, Appendix B, shows that this boy, with intelligence quotient of 87, grade expectancy of 5.9 and an actual reading achievement of 3.4 as measured by the S.R.A. Reading Achievement Test in October, measured 3.9 on the re-test.

Achievement as shown by the Metropolitan Battery increased in reading by 8 months, in social studies information by 2.1 years, in social studies skills by 2.2 years, and in science by 9 months.

According to the observation of the classroom teacher, there was marked increase in the self-esteem of this problem
reader. A vocal individual at all times, this boy has become as vociferous about being able to achieve as he had formerly been about not being able to achieve when the school year started. He is a happier boy, and it is expected that in the five remaining weeks of the school year he might achieve closer to grade expectancy.

Although gain in comprehension was only 4 months it was 6 months in vocabulary; this problem reader went from .00 in percentile rank to 8.108; from a total over-all score of 22 to 34. Comparing this slight achievement with achievement in the content areas and with the increase in self-confidence, it was felt that the psychological approach met with some slight success with Problem Reader No. X.

III. CHANGES WHICH OCCURRED

By thoroughly studying the data obtained for the class group as a whole and for the individual problem reader cases, several conclusions were drawn as to change in achievement which occurred during the six-months' period of the experimental study.

Change Which Occurred for the Class Group

The range of achievement for the class as a whole was increased. In computing the significance of the difference, the t test result was 2.417. For this number of children—thirty-seven—a t test result of at least 2.027 was necessary
to have realized a difference acceptable at the 5 per cent level of confidence; a t test result of 2.718 was necessary for a significant difference at the 1 per cent level of confidence. Analysis of the results as shown in Table IV, Appendix B, leads to the conclusion that the psychological approach to teaching reading to the class as a whole was successful.

Change Which Occurred for Problem Readers

Complete case studies of the ten problem readers revealed that there was statistically validated evidence for the success of the psychological approach in five of ten cases. The only measure considered acceptable was the test-retest comparison of the S.R.A. Reading Achievement Test, since this was the only comparison treated statistically. Therefore, even though in eight of the ten cases there was an acceptable increase in achievement, this was not considered as supporting to the assumption unless there was also measured a change in reading achievement by the test-retest data.

There was considered to have taken place an increase in self-esteem in eight of the ten problem readers. Careful teacher observation and evaluation lends credence to the statement that those problem readers have attained a happier, more valued concept of self and self-esteem as shown through their voluntary participation in class discussion and
increased participation as leaders in class activities. Friendlier and more outgoing in personality at the end of the study, those eight problem readers showed more of a tendency to state their ideas positively rather than hesitantly, as was the case before the study.
CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

As a result of the experimental study of achievement by problem readers, with special attention to the self-concept, certain conclusions were drawn, which led to certain recommendations.

I. SUMMARY

It was the purpose of this study to determine whether a psychological approach to the teaching of reading would be successful with problem readers. It was expected that there would occur an increase in achievement in the content areas as well as an increase in self-esteem of the problem readers.

The experimental study was conducted by a classroom teacher with a heterogeneous sixth grade group. Ten of the forty beginning students were classified as problem readers. Reading achievement was measured through a test-retest pattern using the Science Research Associates Reading Achievement Test. Achievement in content areas was measured through comparison of scores obtained through use of the Metropolitan Achievement Battery. The study continued for six months—from November 1, 1963 to May 1, 1964. The psychological approach used was one which placed the deep,
personal needs of the individual as first in line for consideration. Eight of the problem readers were boys; two were girls.

A review of research and literature in the related areas of achievement, problems, and the self-concept as related to achievement revealed the need for research in this area. While most writers agreed upon a relationship between reading achievement and self-concept, little research has been done in relation to remediation of the self-concept leading to remediation of reading problems. It was generally agreed that teachers must look anew at the definition of, as well as cause and effect of, underachievement.

At the end of the six months' experimental period, retesting of the class group took place. Statistics were evaluated both in relation to the group and in relation to the individual problem readers. It was found that a significant difference at the 5 per cent level of confidence had occurred for the group as a whole. Individual case studies were evaluated for the problem readers. It was found that achievement had been increased significantly in five of ten cases. Nevertheless, there was no gain whatsoever in two cases, and the only gain which could be claimed in the other three cases was through comparison of achievement measured by the Metropolitan Achievement Battery. Teacher observation verified the fact that the self-esteem of eight of ten problem readers did indeed improve.
II. CONCLUSIONS

Although the approach proved statistically significant for the class group as a whole, and although it was statistically verified as having obtained a measurable gain in five out of ten cases, these gains were not significant enough to allow the statement that the hypothesis was confirmed. However, the achievement was of sufficient strength in enough cases to lend support to the hypothesis as a vehicle for further research.

III. RECOMMENDATIONS

It was necessary to attempt to teach the problem readers through use of the basal text prepared for readers achieving at sixth grade level; for at least six of the problem readers, this grade-level basal text was difficult. Possibly a greater achievement might have been realized had they started working in a basal text prepared for their level of reading. It would seem that initial success might have been forthcoming more rapidly. It is recommended that further research be attempted, using this approach, but placing the problem reader in a basal text suited to his level of achievement.

It is also recommended that a study involving such an approach be instigated which could cover at least a
two-year period. The increasing self-confidence, slow to make an appearance in some cases, could have further implications in later school achievement. Further recommended is the use of an objective measure to assess self-esteem of the children.

That a psychological approach had some merit in this experimental study has been established. The working hypothesis, that through use of a psychological approach problem readers could achieve at or near grade expectancy was not confirmed. Further research is recommended.
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BIBLIOGRAPHY

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APPENDIX A

DESCRIPTION OF TEST INSTRUMENTS

Ability Test

Ability was measured by using the S.R.A. Test of General Ability, Form A. This test, which is completely pictorial, eliminates the possibility of reading ability affecting the score and furnishes both an intelligence quotient and a grade expectancy score. Intelligence is defined as principally involving information and reasoning ability; the test utilizes materials that are not dependent upon school-learned concepts. It is divided into two parts, the first section measuring the information, vocabulary, and concepts which children gain through cultural contacts. The second half of the test measures the reasoning power of children and is little affected by cultural contacts. The pupils' total score on the S.R.A. Test of General Ability yields a grade expectancy and an intelligence quotient. All students with the same total score would score at the same grade level, but the intelligence quotients and grade expectancy would vary. This measure carries a Spearman-Brown reliability co-efficient of .88 with a group of 359 sixth graders; it has a Kuder-Richardson reliability
co-efficient of .84 with 322 sixth graders.¹

Reading Achievement Test

The Science Research Associates Achievement Series Reading Test, Form A, was used to measure reading achievement. The norms for this test are equated for direct comparison with the S.R.A. Test of General Ability. The sixth graders tested were not familiar with the achievement test, which measured both comprehension and vocabulary. The test consisted of five stories of graduated difficulty; following each story were two types of questions which yielded the two test scores. The items contributing to the reading comprehension score required the reader to locate specific information and overall meaning, to locate information in several places and compare the information in order to select a correct response, and to locate information and draw logical conclusions from it. The second score yielded was for reading vocabulary, and items contributing to it referred to underlined words in the stories. The items required the reader to select the literal meaning of a specific underlined word when only one of the alternatives in the item gave a correct definition, or to select the

correct meaning of the word as it was used in the story when all of the alternatives gave correct literal definitions of the word, but only one had the shade of meaning used in context. The tests were relatively unspeeded and took two class periods to administer. Kuder-Richardson reliability coefficients of .876, .885, and .893 were established for the comprehension items; coefficients of .866, .875, and .885 were established for the vocabulary items. A mean of .88 resulted. Both percentile and grade equivalent norms were available. ²

Achievement Measured in Content Areas

In this particular school corporation, it was the policy to administer the Metropolitan Achievement Battery at the eighth month level of each school year; thus a fifth grade average achiever should expect to score at least a 5.8 grade level achievement score in all areas of this achievement battery. A grade level achievement score of 6.8 in all areas would be considered an average score for a sixth grade student. Since this achievement battery must be given to the children at the end of the school year, it was decided to use a comparison of Metropolitan achievement scores in science and social studies by the problem readers

at the end of grade five and at the end of grade six in order to note whether or not a psychological approach to improving reading would also effect significant improvement in the content areas.

The Metropolitan Achievement Tests for intermediate grades provide a survey of achievement in reading, vocabulary, arithmetic, both fundamentals and problems, English, literature, geography, history, civics, science, and spelling. The normative program consisted of testing in forty-seven systems of all pupils in grades two through ten in the fall of 1948. Norms for the fifth grade battery were established by scores of 14,233 fifth graders, and norms for the sixth grade battery were established by scores of 14,583 sixth graders. At each battery level, the raw scores on all subtests were converted to a set of normalized standard scores having a mean of fifty and a standard deviation of ten. Raw scores may also be converted to stanines, grade level equivalents, and percentiles. The data on the reliability of the tests consist of split-half coefficients computed separately for pupils in each of several school systems and standard errors of measurement in raw score terms.3

Readiness for Reading Instruction Tested

Since the basal reader series adopted by this school corporation was the Ginn series, the Ginn Readiness Test for sixth graders was administered in order to determine where skill emphasis should be placed for each individual. The Ginn Readiness test provided, through item analysis, a knowledge of each individual's achievement in vocabulary, word analysis, comprehension, and study skills.¹⁴

All tests were administered within a ten-day period in the classroom by the classroom teacher.

¹⁴Ginn and Company, Sixth Grade Readiness Test, 1961.
## APPENDIX B

### TABLE III

**MASTER DATA TABLE, RAW SCORES**

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*Indicates Problem Reader
**TABLE IV**

STATISTICAL TREATMENT OF GROUP
READING ACHIEVEMENT DATA

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Coefficient of Correlation: .81

t-test: 2.417—Significant at 5% level

Formula used to compute the t-test:

\[
t = \frac{61.46 - 53.32}{\sqrt{\frac{(3.13)^2 + (2.60)^2}{2} - 2(0.81)(3.13)(2.60)}}
\]
PROBLEM READER #1
AGE: 11.5
S. R. A. TOGA I.Q.: 140
GRADE EXPECTANCY: 10.7
ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 7.2
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 9.2

METROPOLITAN ACHIEVEMENT BATTERY

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<tr>
<th>READING</th>
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<th>SOCIAL STUDIES READING MAPS AND GRAPHS</th>
<th>SCIENCE</th>
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S. R. A. READING ACHIEVEMENT

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<th>GRADE LEVEL COMP.</th>
<th>GRADE LEVEL VOCAB.</th>
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TABLE VI

PROBLEM READER #2

AGE: 11.5
S. R. A. TOGA I.Q.: 131
GRADE EXPECTANCY: 9.5

ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 6.3
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 6.4

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*This problem reader was not able to complete the first section of the test in the time allowed; all unanswered questions were in the vocabulary section.
TABLE VII

PROBLEM READER #3

AGE: 10.10
S.R.A IQ: 121
GRADE EXPECTANCY: 7.8

ACHIEVEMENT (COMPOSITE) S.R.A. TEST A: 5.3
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B: 5.7

METROPOLITAN ACHIEVEMENT BATTERY

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S.R.A. READING ACHIEVEMENT

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<td>B: 51</td>
<td>27.03</td>
<td>- .541</td>
<td>27.027</td>
<td>5.8</td>
<td>5.6</td>
</tr>
</tbody>
</table>
TABLE VIII

PROBLEM READER #4
AGE: 11.8
S.R.A. TOGA I.Q.: 117
GRADE EXPECTANCY: 8.6
ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 6.5
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 9.85

METROPOLITAN ACHIEVEMENT BATTERY

<table>
<thead>
<tr>
<th>READING</th>
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<th>SOCIAL STUDIES READING MAPS AND GRAPHS</th>
<th>SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 10.0+</td>
<td>6.6</td>
<td>10.0+</td>
<td>10.0+</td>
</tr>
<tr>
<td>B: 10.0+</td>
<td>10.0+</td>
<td>10.0+</td>
<td>10.0+</td>
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</table>

S.R.A. READING ACHIEVEMENT

<table>
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<tr>
<th>TOTAL SCORE</th>
<th>RANK IN CLASS</th>
<th>z SCORE</th>
<th>PERCENTILE RANK</th>
<th>GRADE LEVEL COMP.</th>
<th>GRADE LEVEL VOCAB.</th>
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</thead>
<tbody>
<tr>
<td>A: 60</td>
<td>12.50</td>
<td>.416</td>
<td>66.22</td>
<td>7.0</td>
<td>6.1</td>
</tr>
<tr>
<td>B: 88</td>
<td>5.00</td>
<td>1.374</td>
<td>86.49</td>
<td>9.9</td>
<td>9.8</td>
</tr>
</tbody>
</table>
TABLE IX

PROBLEM READER #5

AGE: 11.2
S.R.A. TOGA I.Q.: 108
GRADE EXPECTANCY: 6.9

ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 4.8
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 5.1

METROPOLITAN ACHIEVEMENT BATTERY

<table>
<thead>
<tr>
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<th>SOCIAL STUDIES INFORMATION</th>
<th>SOCIAL STUDIES READING MAPS AND GRAPHS</th>
<th>SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 3.8</td>
<td>4.6</td>
<td>5.0</td>
<td>4.6</td>
</tr>
<tr>
<td>B: 5.7</td>
<td>7.8</td>
<td>6.8</td>
<td>5.7</td>
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</table>

S.R.A. READING ACHIEVEMENT

<table>
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<tr>
<th>TOTAL SCORE</th>
<th>RANK In CLASS</th>
<th>z SCORE</th>
<th>PERCENTILE RANK</th>
<th>GRADE LEVEL COMP.</th>
<th>GRADE LEVEL VOCAB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 40</td>
<td>29.0</td>
<td>-0.830</td>
<td>21.62</td>
<td>4.6</td>
<td>5.0</td>
</tr>
<tr>
<td>B: 43</td>
<td>29.0</td>
<td>-0.955</td>
<td>21.62</td>
<td>4.3</td>
<td>5.8</td>
</tr>
</tbody>
</table>
This problem reader was not able to complete the first section of the test in the time allowed; all unanswered questions were in the vocabulary section.
TABLE XI

PROBLEM READER #7

AGE: 11.6
S.R.A. TOGA I.Q.: 103
GRADE EXPECTANCY: 6.9

ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 4.8
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 4.8

METROPOLITAN ACHIEVEMENT BATTERY

<table>
<thead>
<tr>
<th>Reading</th>
<th>Social Studies Information</th>
<th>Social Studies Reading Maps and Graphs</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.9</td>
<td>5.7</td>
<td>4.1</td>
</tr>
<tr>
<td>B</td>
<td>5.3</td>
<td>7.8</td>
<td>5.5</td>
</tr>
</tbody>
</table>

S.R.A. READING ACHIEVEMENT

<table>
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<tr>
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<th>Rank in Class</th>
<th>z Score</th>
<th>Percentile Rank</th>
<th>Grade Level Comp.</th>
<th>Grade Level Vocab.</th>
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</thead>
<tbody>
<tr>
<td>A: 39</td>
<td>31.0</td>
<td>- .892</td>
<td>16.22</td>
<td>3.3</td>
<td>6.3</td>
</tr>
<tr>
<td>B: 40</td>
<td>30.5</td>
<td>-1.111</td>
<td>17.567</td>
<td>4.6</td>
<td>5.0*</td>
</tr>
</tbody>
</table>

*This problem reader was not able to complete any of the third section of Test #1, which affected both comprehension and vocabulary scores.
TABLE XII

PROBLEM READER #8

AGE: 12.1
S.R.A. TOGA I.Q.: 92
GRADE EXPECTANCY: 5.6

ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 3.9
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 4.75

METROPOLITAN ACHIEVEMENT BATTERY

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<th>SOCIAL STUDIES READING MAPS AND GRAPHS</th>
<th>SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 4.9</td>
<td>3.8</td>
<td>5.3</td>
<td>5.0</td>
</tr>
<tr>
<td>B: 4.2</td>
<td>6.0</td>
<td>4.1</td>
<td>5.1</td>
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</table>

S.R.A. READING ACHIEVEMENT

<table>
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<tr>
<th>TOTAL SCORE</th>
<th>RANK IN CLASS</th>
<th>z SCORE</th>
<th>PERCENTILE RANK</th>
<th>GRADE LEVEL COMP.</th>
<th>GRADE LEVEL VOCAB.</th>
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</thead>
<tbody>
<tr>
<td>A: 29</td>
<td>35.0</td>
<td>-1.515</td>
<td>5.405</td>
<td>3.7</td>
<td>4.1</td>
</tr>
<tr>
<td>B: 40</td>
<td>30.5</td>
<td>-1.111</td>
<td>17.567</td>
<td>5.6</td>
<td>3.9*</td>
</tr>
</tbody>
</table>

*This problem reader was not able to complete any of the third section of Test #1, which affected both comprehension and vocabulary score.
TABLE XIII

PROBLEM READER #9

AGE: 13.5
S.R.A. TOGA I.Q.: 87
GRADE EXPECTANCY: 5.9

ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 4.7
ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 4.2

METROPOLITAN ACHIEVEMENT BATTERY

<table>
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<th>SOCIAL STUDIES READING MAPS AND GRAPHS</th>
<th>SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 4.9</td>
<td>4.3</td>
<td>4.4</td>
<td>5.1</td>
</tr>
<tr>
<td>B: 5.5</td>
<td>6.0</td>
<td>4.4</td>
<td>5.4</td>
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</table>

S.R.A. READING ACHIEVEMENT

<table>
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<tr>
<th>TOTAL SCORE</th>
<th>RANK IN CLASS</th>
<th>z SCORE</th>
<th>PERCENTILE RANK</th>
<th>GRADE LEVEL COMP.</th>
<th>GRADE LEVEL VOCAB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 32</td>
<td>34.0</td>
<td>-1.328</td>
<td>8.11</td>
<td>3.3</td>
<td>5.2</td>
</tr>
<tr>
<td>B: 32</td>
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<td>-1.525</td>
<td>.00</td>
<td>4.2</td>
<td>4.1</td>
</tr>
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</table>
TABLE XIV

PROBLEM READER #10

AGE: 12.7

S.R.A. TOGA I.Q.: 87

GRADE EXPECTANCY: 5.9

ACHIEVEMENT (COMPOSITE) S.R.A. TEST A.: 3.4

ACHIEVEMENT (COMPOSITE) S.R.A. TEST B.: 3.9

METROPOLITAN ACHIEVEMENT BATTERY

<table>
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<tr>
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<th>SOCIAL STUDIES INFORMATION</th>
<th>SOCIAL STUDIES READING MAPS AND GRAPHS</th>
<th>SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 3.0</td>
<td>4.9</td>
<td>3.5</td>
<td>3.9</td>
</tr>
<tr>
<td>B: 3.8</td>
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<td>5.7</td>
<td>4.8</td>
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</table>

S.R.A. READING ACHIEVEMENT

<table>
<thead>
<tr>
<th>TOTAL SCORE</th>
<th>RANK IN CLASS</th>
<th>z SCORE</th>
<th>PERCENTILE RANK</th>
<th>GRADE LEVEL COMP.</th>
<th>GRADE LEVEL VOCAB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 22</td>
<td>37.0</td>
<td>-1.952</td>
<td>.00</td>
<td>3.0</td>
<td>3.8</td>
</tr>
<tr>
<td>B: 34</td>
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<td>-1.422</td>
<td>8.108</td>
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<td>4.4</td>
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