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A STUDY TO MEASURE THE ATTITUDES OF SIXTH GRADE TEACHERS TOWARD THEIR STUDENTS AND THE RELATIONSHIP OF THESE ATTITUDES TOWARD THE ACHIEVEMENT OF SIXTH GRADE STUDENTS IN ACQUIRING READING SKILLS.

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by
Doris Marie Kilanski

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of the requirements for the degree of
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Doctoral Committee:

Professor Lowell W. Beach, Chairman
Associate Professor Ann D. Hungerman
Associate Professor Harold V. King
Professor Findlay C. Penix

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ABSTRACT

A STUDY TO MEASURE THE ATTITUDES OF SIXTH GRADE TEACHERS TOWARD THEIR STUDENTS AND THE RELATIONSHIP OF THESE ATTITUDES TOWARD THE ACHIEVEMENT OF SIXTH GRADE STUDENTS IN ACQUIRING READING SKILLS

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Chairman: Lowell W. Beach

An attempt was made in this research project to discover whether a significant relationship exists between the attitude of sixth grade teachers toward their students, and the achievement sixth grade students make in acquiring reading skills. The writer analyzed the reading achievement of two groups of sixth-grade students, one group that had teachers who rated higher on the Minnesota Teacher Attitude Inventory and the other group that had teachers who rated lower. The reading achievement of the sixth-grade students was measured by pre- and post testing of the reading vocabulary and reading comprehension sections of the Iowa Test of Basic Skills, forms 3 and 4. The analysis of covariance was used to analyze the pre- and post test data.

A school district located in Macomb County in southeastern Michigan was chosen as the site for this study. From the forty-five teachers who took the Minnesota Teacher Attitude Inventory, the ten highest ranking teachers and the ten lowest were chosen to be the teacher sample. The

students of these twenty teachers were the student sample, numbering 475.

The ten High Attitude Teachers and the ten Low Attitude Teachers used in this study were similar to each other in sex, highest degree held, and years of teaching experience. They differed in their position of ranking according to their raw score on the Minnesota Teacher Attitude Inventory. The student sample of these two groups of teachers were similar in sex, I.Q. means, and socio-economic status.

Evidence in this study supports the belief that the attitude of a teacher toward his students is a significant variable in the reading achievement of sixth grade students. This relationship was found to exist between teacher attitude and student achievement in the area of reading comprehension and was established consistently throughout the study, regardless of the way students were grouped according to the four variables of sex, I.Q., length of residence in their school community, and stage in the family cycle. There was no evidence in this study that teacher attitude had any influence on student achievement in the area of reading vocabulary.

An additional questionnaire of thirty items was devised by the writer with the aid of specialists in the fields of curriculum, reading, and elementary guidance. This questionnaire was designed to identify strong areas of attitude of the teachers. The three areas covered in

this questionnaire were attitude toward students, teaching of reading, and school curriculum. The mean score achievement in all three areas of reading vocabulary, reading comprehension, and average reading scores differed very little between the High Attitude Teacher groups and the Low Attitude Teacher groups. In no instance was the difference between the two attitude groups significant.

The main finding of this study is that there is a relationship between students' achievement in reading comprehension and their teachers' attitude toward them. It appears to matter how the teacher relates to students when their higher thinking powers are being used. It may be that students can learn to word-call from a teaching machine, from programmed material, from other members of the class, from other coded methods. But when students are asked to form these words into meaningful units and re-act to them by making judgments or inferences, it may be that they need the encouragement, the friendliness, the example, the positive force of their teacher.

ACKNOWLEDGMENT

To Dr. Lowell W. Beach, my advisor throughout the doctoral program and the chairman of my dissertation committee, I can express only the deepest sentiments of appreciation and gratitude for his professional assistance, as well as his supportive friendship.

To Dr. Ann Hungerman, Dr. Harold King and Dr. Findlay Penix, my deepest thanks for their enthusiastic encouragement and their constructive suggestions to assist me in conducting educational research.

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To Dr. M. Clemens Johnson and Miss Esther Schaeffer, who patiently guided me through the statistical analysis of this study and the computer processing of the data, there is no adequate way to express my appreciation. Without their help, I could not have made a professional analysis of the data.

To Mr. Leonard Morrison, Elementary Curriculum Director of the Utica Community School Systems, I must make a very special acknowledgment. Mr. Morrison completely endorsed this research project and offered complete cooperation in every way. I can never completely acknowlege my

gratitude to the twenty-two elementary school principals who scheduled a time for us to do the testing, the forty-five sixth grade teachers who cooperated by permitting us to test their students, and who answered two lengthy questionnaires. This acknowledgment must also include the 1291 sixth grade students who took the Vocabulary and Comprehension sections of the Iowa Test of Basic Skills on warm and uncomfortable days in May, 1970. Without the cooperation of the Utica Community School System, this research project would never have become a reality.

Finally a tremendous debt of gratitude is due to my family, Edward, John, and Mary, who have been exceedingly patient, helpful, and encouraging throughout the years of my graduate study.

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS ii

LIST OF TABLES vi

LIST OF APPENDIXES vii

CHAPTER

I. INTRODUCTION AND RESEARCH DESIGN. 1

General Problem 1
Purpose of the Study. 3
Research Design 5
Hypotheses Tested 7
Statement of Procedures 8

Selection of Sample. 8
Testing Schedule 10
Selection of Instruments 11

Summary 17

II. REVIEW OF LITERATURE. 17

Teacher Values and Belief Systems 18
Interaction Between Teacher and Pupil 25
Teacher Expectation of Students 30
Effectiveness of Teacher Influence in Reading Program 33

Summary 41

III. ANALYSIS OF DATA. 46

Introduction. 46
Descriptive Data. 47

Teachers 47
Students 54

Inferential Data. 62

Procedures Used. 62
Teacher Attitude and Student Achievement in Reading Vocabulary 64
Teacher Attitude and Student Achievement in Reading Comprehension. 65
Teacher Attitude and Student Achievement in Average Reading Scores 68

Page

Interaction Effect Indicated by the Analysis of Covariance. . . . 68

Summary of Relationship Between High and Low Attitude Teachers and Reading Achievement 71

30-Item Questionnaire. 72

Summary of Findings 76

IV. SUMMARY AND CONCLUSIONS 78

Restatement of Problem Studied . . . 78
Findings and Conclusions 79

Hypothesis 1 79
Hypothesis 2 80
Hypothesis 3 80
Hypothesis 4 81
Hypothesis 5 82
Hypothesis 6 83

Summary of Research Project. 84
Suggestions for Further Research . . 88
Implications of this Study for Education 89

APPENDIXES 92

BIBLIOGRAPHY 108

LIST OF TABLES

Table		Page
1.	Minnesota Teacher Attitude Inventory Raw Scores and Percentile Rank	48
2.	Frequency Distribution of MTAI Scores	50
3.	Description of High Attitude and Low Attitude Teachers	52
4.	Listing of Teachers and Their Rank Order Responses to the MTAI and the Three Areas Measured in 30-Item Questionnaire	53
5.	Sex of Student Sample	56
6.	I.Q. Scores of Student Sample	57
7.	Length of Residence of Sample Students	59
8.	Stage in the Family Cycle of Sample Students	60
9.	Reading Vocabulary Mean Scores of High and Low Attitude Teacher Groups when Students are Grouped According to Sex, I.Q., Length of Residence, and Stage in the Family Cycle	66
10.	Reading Comprehension Mean Scores of High and Low Attitude Teacher Groups when Students are Grouped According to Sex, I.Q., Length of Residence, and Stage in the Family Cycle	67
11.	Average Reading Scores of High and Low Attitude Teacher Groups when Students are Grouped According to Sex, I.Q., Length of Residence, and Stage in the Family Cycle	69
12.	Interaction of Other Factors with Teacher Attitude in Affecting Reading Achievement	70
13.	Analysis of Covariance Findings Indicating High and Low Attitude Group Mean Scores when Teachers are Grouped According to Their Responses on the 30-Item Questionnaire	74

LIST OF APPENDIXES

APPENDIX		Page
A.	30-Item Questionnaire	92
B.	Correlation of Student Pre- and Post-Data	97
C.	Listing of the Questions of the 30-Item Questionnaire Showing the Mean Responses of the Teachers	100
D.	Student Questionnaire	106

CHAPTER I

INTRODUCTION AND RESEARCH DESIGN

General Problem

Some students are more successful in acquiring reading skills than other students are. Why?

The teaching methods of effective teachers have been studied for years to determine why they are effective. Teaching materials have been analyzed, researched, revised, and re-studied, in an attempt to discover their importance in the acquiring of reading skills.

In recent years numerous complex studies have been sponsored by the United States Office of Education to determine the effectiveness of various methods of teaching reading, as well as the effectiveness of different materials used in the teaching of reading. These studies have shown without question that while methods and materials are important variables in the teaching of reading, the most important variable is the teacher himself. The teacher most often spells the difference between success and failure for a student as he learns to read.[1]

What variable then differentiates the effective teacher of reading from the ineffective teacher of

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[1]Albert J. Harris, "The Effective Teacher of Reading." (The Reading Teacher, December 1969). p. 195-203.

reading? Is there perhaps a relationship between the attitude a teacher has toward his students, and his students' success in learning reading skills?

This study attempted to discover whether a significant relationship exists between the attitude of sixth grade teachers toward their students, and the achievement of sixth grade students in acquiring reading skills. The attitude of sixth grade teachers toward their students was measured by using the Minnesota Teacher Attitude Inventory.[2] The teachers also answered a 30-item Likert-type questionnaire concerning their attitude toward students, the teaching of reading, and the school curriculum. (See Appendix A.)

The achievement of reading skills by students was measured by computing the difference between the scores obtained from the reading skills section of the Iowa Test of Basic Skills[3] Form 3, administered in November 1969, and the reading skills scores of the ITBS Form 4, administered in May, 1970. The I.Q. and the sex of each student, as well as two basic socio-economic facts for each student, (his stage in the family cycle, and his length of residence) were used to further investigate possible relationships between teacher attitude and student achievement.

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[2] Hereafter referred to as MTAI.

[3] Hereafter referred to as ITBS.

Purpose of the Study

The purpose of this study was to explore the attitudes of sixth grade teachers toward their students, and the relationship between these attitudes and the achievement of sixth grade students in acquiring reading skills. This study attempted to supply some answers for educators who are seeking more effective ways of teaching reading skills to students. The following questions were raised:

1. Will students who have teachers that rank higher in attitude toward students, achieve significantly better in acquiring reading vocabulary skills, than those students who have teachers who rank lower in attitude toward students?

2. Will students who have teachers who rank higher in attitude toward students, achieve significantly better in acquiring reading comprehension skills, than those students who have teachers who rank lower in attitude toward students?

3. Will students who have teachers who rank higher in attitude toward students achieve significantly better in acquiring both vocabulary and comprehension skills, than those students who have teachers who rank lower in attitude toward students?

4. Will students who have teachers who rank higher in attitude toward the teaching of reading, achieve significantly better in acquiring both vocabulary and comprehension skills, than those students who have teachers who rank lower in attitude toward the teaching of reading?

5. Will students who have teachers who rank higher in attitude toward the school curriculum, achieve significantly better in acquiring both vocabulary and comprehension skills, than those students who have teachers who rank lower in attitude toward the school curriculum?

Questions were also raised concerning the sex and I.Q. of the students, their length of residence, their stage in the family cycle, and the relationship of these variables to student achievement of reading skills in classrooms where teachers ranked higher or lower in attitude toward students.

To investigate these questions, a study to compare the achievement of sixth grade boys and girls of two groups of sixth grade teachers appeared to be appropriate. The students from the classrooms of teachers who ranked higher on the MTAI were considered the experimental group, the students from the classrooms of teachers who ranked lower on the MTAI were considered the control group.

The dependent variable in this study was the achievement of students in acquiring reading skills as measured by the ITBS. The independent variable was the

attitude of teachers toward students as measured by the MTAI and by the 30-item questionnaire

Research Design

This study was designed to examine the achievement of sixth grade students in acquiring basic reading skills when they are taught by teachers who ranked higher in attitude toward students and by teachers who ranked lower in attitude toward students. The MTAI was chosen for the purpose of measuring teacher attitude and was given to forty-five sixth grade teachers in the Utica Community School District, Utica, Michigan. Those ten teachers who ranked highest and those ten teachers who ranked lowest in percentile rank were identified as the teacher sample.

An additional questionnaire of thirty items was devised by the writer with the aid of specialists in the fields of curriculum, reading, and elementary guidance. This questionnaire was designed to identify strong areas of attitude of the teachers. The three areas covered in this questionnaire were attitude toward students, teaching of reading, and school curriculum. The teachers were also asked to state their sex, the number of years they have taught, and their highest earned degree.

The achievement of reading skills of the students was tested by the administration of the vocabulary and the reading comprehension sections of the ITBS, forms 3 and

4. Form 3 had been administered by the Utica Community School District during November, 1969. The scores of this test were considered to be the pre-test data and were obtained by the writer from the computer print-out sheets on file at the Utica Community School offices.

The post-test data, the vocabulary and reading comprehension sections of the ITBS form 4, were gathered by the writer by administering this form of the test to 1291 sixth grade students during thirteen school days from May 4 to May 20, 1970. The writer was assisted by four graduate students who have had experience in teaching sixth grade students.

The I.Q. data concerning these students was obtained from computer print-out sheets, the results of the Lorge-Thorndike Intelligence Test, Test B-2, verbal and non-verbal, which had been administered to the sixth grade students when they were in the fifth grade. This test had been administered in October, 1968 by the Testing Division of the Utica Community School District.

An additional questionnaire concerning the students' stage in the family cycle and their length of residence was also devised. This questionnaire was given to the sixth grade students at the same time they were given form 4 of the ITBS in May, 1970.

Hypotheses Tested

The following null hypotheses were tested.

1. There is no difference between the mean reading vocabulary scores of the sixth grade students whose teachers rank higher in attitude (MTAI) and whose teachers rank lower (MTAI).

2. There is no difference between the mean reading comprehension scores of the sixth grade students whose teachers rank higher in attitude (MTAI) and whose teachers rank lower (MTAI).

3. There is no difference between the combined mean vocabulary and reading comprehension scores of the sixth grade students whose teachers rank higher in attitude (MTAI) and whose teachers rank lower (MTAI).

4. There is no difference between the mean reading scores of the sixth grade students whose teachers rank higher in attitude toward students (30-item questionnaire) and whose teachers rank lower in attitude toward students (30-item questionnaire).

5. There is no difference between the mean reading scores of the sixth grade students whose teachers rank higher in attitude toward the teaching of reading (30-item questionnaire) and whose teachers rank lower in attitude.

6. There is no difference between the mean reading scores of the sixth grade students whose teachers rank higher in attitude toward curriculum (30-item questionnaire) and whose teachers rank lower in attitude toward curriculum (30-item questionnaire).

The variables of sex, I.Q., length of residence, and stage in the family cycle were examined for their significance in the relationships established between teacher attitude and student achievement in reading.

Statement of Procedures

Selection of Sample

Through the cooperation of Mr. Phillip Runkel, superintendent of schools, and Mr. Leonard Morrison, elementary curriculum coordinator of the Utica Community School District, the elementary school principals, teachers and students of twenty-two elementary schools, this study was carried out. In February 1970, an exploratory meeting was held with Mr. Morrison who subsequently met with the superintendent of schools and with the elementary school principals to obtain their cooperation in carrying out this project.

Mr. Morrison thought that the best interests of the school district would be met by having every sixth grade student and every sixth grade teacher participate in this study. It was agreed that all forty-five sixth grade

teachers would answer the MTAI and the 30-item questionnaire, and that the 1291 students of these teachers would take the vocabulary and reading comprehension sections of the ITBS. It was also agreed to limit the final teacher sample selection to those teachers engaged in the established Houghton Mifflin reading program as directed by eight certified reading consultants. Teachers engaged in pilot programs, federally funded title programs, special innovative or singularly differing reading programs were excluded from the teacher sample selection.

It was possible to choose the teacher sample from the results of the MTAI by identifying those ten teachers who had received the highest percentile scores and those ten teachers who had received the lowest percentile scores. These twenty teachers were considered the sample group and were identified only by code numbers, not by names or schools.

The 475 sixth grade students in the classrooms of the twenty sample teachers were considered the student sample. These 475 students represented only those students for whom complete data could be obtained. They had taken both the pre and post sections of the ITBS, had taken the Lorge-Thorndike Intelligence Test in the fifth grade, and had completed the questionnaire concerning their stage in the family cycle and length of residence.

Testing Schedule

The writer, with the assistance of four graduate students who had experience teaching sixth grade students, administered the V (vocabulary) and R (reading comprehension) sections of the ITBS form 4, from May 4 to May 21, 1970. At the completion of the ITBS the students were asked to complete the short questionnaire concerning their length of residence in their school community and their stage in the family cycle.

While the students were answering the ITBS, the sixth grade teachers were asked to respond to the MTAI and the 30-item questionnaire. The teachers also indicated how many years they had taught, whether they were male or female, and the highest degree earned. A code number was assigned to each teacher's questionnaire so as to remove the possibility of identifying individual participants.

The MTAI was sent to the Psychological Corporation, New York, for professional checking. The ITBS was sent to the Measurement Research Center, Iowa City, Iowa, for computer scoring service.[4] By July 1, 1970, the results of both the MTAI and the ITBS were received by the writer.

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[4]Measurement Research Center (MRC) located in Iowa City, Iowa, the Computer Processing Agency for Houghton Mifflin Company.

Selection of Instruments

Minnesota Teacher Attitude Inventory.--The writer chose to use the MTAI as an indicator of teacher attitude toward students since this instrument was designed essentially to measure the attitudes of a teacher toward children and school work.[5] After ten years of investigations, Cook and Leeds contend that the attitudes of teachers toward children and school work can be measured with high reliability, and that they are significantly correlated with teacher-pupil relations found in the teachers' classrooms. The authors also assume that a teacher who ranks at the high end of the scale should be able to maintain a state of harmonious relations with his pupils characterized by mutual affection and sympathetic understanding. The pupils should like the high attitude teacher and should enjoy school work; the high attitude teacher should like the children and should likewise enjoy teaching.

On the other hand, the teacher at the other end of the scale (the lower attitude teachers) will attempt to dominate the classroom and will tend to think in terms of status, the correctness of the position he takes on classroom matters, and the subject matter to be covered rather

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[5]W. Cook, C. Leeds, R. Callis, Minnesota Teacher Attitude Inventory Manual. (New York: Psychological Corporation, 1955). p. 3.

than in terms of what the pupil needs, feels, knows, and can do.[6]

30-item questionnaire.--In addition to the MTAI, the writer constructed a 30-item questionnaire designed to investigate the attitude of the sixth grade teachers in the areas of attitude toward students, school curriculum, and the teaching of reading. This 30-item questionnaire was composed of ten Likert-type statements on a four-point scale. These questions were developed with the assistance of specialists in the field of teaching of reading, curriculum, and elementary school guidance.

The 30-item questionnaire was weighted in the areas of attitude toward the teaching of reading and attitude toward students, so that four points were counted for "strongly agree," three points for "agree," two points for "uncertain," one point for "disagree," and zero points for "strongly disagree." In the area of curriculum there was an inverse weighting, so as to lessen the possibility of the teachers providing the answers which they thought were desired by the writer.

Each area of attitude toward students, teaching of reading, and curriculum, were scored separately. At no time was a composite score of the entire questionnaire

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[6]Ibid., p. 3.

considered.

The 30-item questionnaire was subjected to two pilot studies, each with Eastern Michigan University graduate students who were attending evening classes but who were employed in the public schools during the day. These students represented both elementary and high school levels. The first pilot study, January 1970, suggested semantic changes which were inaugurated. The second pilot study, March 1970, produced few semantic problems and the desired spread in the scoring appeared to be sufficiently discriminatory.

It was anticipated that there would be a positive correlation between the teacher response on the standardized MTAI and the teacher response in the three areas of this questionnaire.

Iowa Test of Basic Skills.--In the Utica Community School System the ITBS form 3 had been administered to every sixth grade student during the month of November 1969. The administering of this test of student achievement was organized and directed by a central office of testing. The primary purpose of the ITBS, as indicated in the teacher's manual is to reveal how well each pupil has mastered the basic skills.[7] The comprehensive achieve-

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[7] E. F. Lindquist and A. N. Hieronymus, Teacher's Manual, Iowa Tests of Basic Skills. (Boston: Houghton Mifflin Co., 1964), p. 3.

ment measurement includes the areas of vocabulary, reading, the mechanics of correct writing, methods of study, and arithmetic.[8]

The writer chose to administer Test V (vocabulary) and Test T (reading comprehension) from the test battery for this research project. Machine scoring sheets were used in conjunction with form 4 test booklets. Form 4 of the ITBS was chosen for this study as form 3 and form 4 are correlated forms, their test items having been chosen from the same pool of items.[9] Form 3 had been administered during the fall of 1969 to the sixth grade students.

The correlation of reliability between form 3 and form 4 in Test V (vocabulary) was measured as .86. The correlation of reliability between form 3 and form 4 of Test T (reading comprehension) was .84.[10]

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[8] Ibid., p. 3.

[9] Ibid., p. 3.

[10] E. F. Lindquist and A. N. Hieronymus, Manual for Administrators, Supervisors, and Councelors - Iowa Test of Basic Skills. (Iowa City: Houghton Mifflin Co., 1964). p. 44.

Information concerning a student's length of residence and his stage in the family cycle was obtained at the same time the ITBS was administered. It had been anticipated that the variable of education level of parents would become a vital part of the statistical analysis in this study. A problem arose during the first day of testing concerning the students' ability or reluctance to give this kind of information. Since this information is not available in a consistent or reliable form within the school records and the 1970 census tract data were not yet available the variable of education level of parents' was deleted from the study.

Summary

The relationship between a teacher's attitude toward students and the students' achievement in acquiring reading skills at the sixth grade level was the primary purpose of this research. The teacher attitude was measured by the MTAI, and the student achievement was measured by the ITBS. A secondary attitude instrument was devised and used, the 30-item questionnaire.

The independent variable considered was teacher attitude, the dependent variable was student achievement in reading. Other variables investigated were I.Q., sex, length of residence in the student's school community, stage in the family cycle, and education level of parents.

In analyzing the data, a descriptive approach was used to indicate the characteristics of the variables studied. To discover significance of relationships between variables the covariance of analysis was used.

CHAPTER II

REVIEW OF LITERATURE

Educational researchers have expended a great deal of time and energy in analyzing the effectiveness of teachers in the teaching-learning situation. They have been asking for years, what the relationship is between a teacher's attitude, personality, values, habits, or beliefs, and the way children learn, change their behavior, or react to the school environment.

Getzels and Jackson (1963) explored 800 studies which were completed between 1950 and 1963, searching for significant, reliable relationships concerning a teacher's personality and his effectiveness in the classroom.[11] They found that effective teachers are friendly, cheerful, sympathetic, and morally virtuous rather than cruel, depressed, unsympathetic, and morally depraved. However, the authors thought that when this much had been said not very much useful information had been revealed as teaching implies a human interaction which is conceivably better when the people involved are friendly,

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[11] J. W. Getzels and P. W. Jackson, "The Teacher's Personality and Characteristics," Handbook of Research on Teaching, ed. N. L. Gage (Chicago: Rand McNally and Co., 1963). p. 506.

cheerful, sympathetic and virtuous.[12]

What is needed, according to Getzels and Jackson, is not more research leading to the reiteration of the self-evident, but to the discovery of specific and distinctive features of teacher personality and of the effective teacher.[13] In this review major emphasis will be given to but one of the eight aspects of personality examined by Getzels and Jackson, teacher attitude. The specific area of teaching attitude and effectiveness in the teaching of reading will also be explored.

The general plan of the chapter observes the following topical sequence:

1. Studies which investigate teacher values and belief systems.

2. Relation of pupil achievement to interaction between teacher and pupil.

3. Consideration of the relationship of teacher expectation of students to their achievement.

4. Effectiveness of teacher influence in beginning and on-going reading programs.

Teacher Values and Belief Systems

Teacher belief systems were investigated by Harvey

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[12]Ibid.. p. 574.

[13]Ibid.. p. 574.

et al (1965) at the University of Colorado. After 168 Head Start teachers were given the "This I Believe Test" (TIB) and the "Conceptual Systems Test" (CST), ten teachers were categorized as concrete, ten as abstract and ten as in-between. These thirty teachers were observed by the research team as they taught their regular classes of Head Start children. Those teachers who were identified as having a concrete system of teaching appeared to be more structured, more invariant, less flexible than the abstract system teachers who were flexible, variant, and less structured. The in-between teachers exhibited qualties of both the concrete and abstract systems of teaching. Harvey concluded that the more abstract teachers differ markedly from concrete subjects in teaching approaches and in the classroom atmospheres they generate.[14]

Joyce et al (1966) at the University of Chicago also investigated abstract and concrete belief systems of teachers. They found that the abstract subjects they examined took more definite positions about children as they received more information about the children. The concrete belief subjects did not become more certain as they

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[14]O. J. Harvey et al, Teachers Belief Systems and Pre-School Atmosphere (Washington D.C.: Educational Resources Information Center, U. S. Department of Health, Education and Welfare, ED 014 320, 1965). p. 20.

received more information about a child's background. Joyce suggested that conceptual organization and belief does affect the handling of information about children by teachers. Ninety three students in graduate educational psychology courses were used in this study.[15]

In an attempt to identify the principal dimensions of teacher belief systems regarding the classroom teaching-learning process, Wehling and Charters (1969) chose 291 respondents with wide diversity in age, sex, teaching level, private or urban school. These subjects were given a Likert-type questionnaire which had been specifically designed for this study and which was concerned with classroom teaching and learning. Eight distinct dimensions of teacher beliefs emerged with sufficient regularity and emphasis to suggest that they are not idiosyncratic to a particular population or method of study. These areas were: subject-matter emphasis, personal adjustment ideology, student autonomy, emotional disengagement, student view-point, classroom order, student challenge and integrative learning.[16]

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[15]B. Joyce, H. Lamb, and J. Sibol, "Conceptual Development and Information Processing: A Study of Teachers," Journal of Educational Research, Vol. 59, No. 5 (January, 1966). p. 219-222.

[16]Leslie J. Wehling and W. W. Charters, "Dimensions of Teacher Beliefs About the Teaching Process," American Educational Research Association Journal, Vol. 6, No. 1 (January, 1969). p. 11-12.

Though it was not within the domain of this study to explore the relationships between teacher beliefs about the educative process and behavior of teachers in the schools, the authors speculated about these relationships from their findings and recommended hypotheses for future studies. The authors hypothesized that the teacher high in subject-matter emphasis would evaluate the progress of his pupils consistently in the light of subject and skill mastery, rather than in pupils' demonstration of interest or effort. It is also possible that the subject-oriented teacher would take the results of standardized tests seriously and would stress the accomplishment of an individual in comparison with the rest of the group rather than show concern for a child's emotional or personal adjustments. A teacher who was high in personal adjustment ideology would be expected to disregard norms, perhaps, in favor of other personal development considerations. For this reason the researchers suggested that future research explore the full explication of the organization of belief systems with approaches other than factor analysis which was used here. The research here had been done to specify topical units that comprise the domain of classroom beliefs.[17]

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[17]Ibid.. p. 23.

At the University of Florida, Gooding and Combs (1964) investigated which perceptual organizations of teacher subjects, as inferred from observations and interviews, are characterististic of effective teachers. Twenty perceptual hypotheses were investigated in this study using a sample of thirty-two classroom teachers, nineteen of whom had been classified as effective by their principals and curriculum coordinators, and thirteen who had been classified as ineffective. The samples were matched by sex, age, years' experience in the county system, total years of teaching experience, National Teacher Examination scores, and academic training.[18]

Trained observers visited each of the teachers for three observation sessions and one interview. Neither they nor the teachers had any knowledge of how the teachers were classified. Each observer made his ratings independently although they visited teachers in teams of two. Ratings were made on a perception score-sheet which included each of the twenty hypotheses, rated on a seven-point scale.[19]

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[18]C. T. Gooding and A. W. Combs, "The Perceptual Organization of Effective Teachers," Flordia Studies in the Helping Professions, ed. A. W. Combs (Gainesville, Florida: University of Florida, 1969). p. 29.

[19]Ibid.. p. 32.

Results of this study indicate that in teaching there is a strong relationship between the perceptual organization of the person and his effectiveness as a professional worker. A statistically significant difference existed between groups of effective and ineffective teachers on the basis of perceptual organization as it was inferred from the classroom observations.[20]

The effective teachers observed tended to be concerned with people rather than with things, they also tended to perceive other people and their behavior as able rather than unable, friendly rather than unfriendly, worthy rather than unworthy, dependable rather than undepandable, helpful rather than hindering. Concerning his teaching task, the effective teachers tended to perceive it as freeing students rather than controlling them, revealing rather than concealing, involved rather than uninvolved, and as an encouraging process rather than orientation toward the achievement of goals.[21]

The authors concluded that this study revealed effective and ineffective teachers as having characteristically different perceptual organizations in terms of the perceptual hypotheses which were tested. The ef-

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[20] Ibid.. p. 32.

[21] Ibid.. p. 33.

fective teachers in this study were characterized by a greater degree of sensitivity to the feelings of students. They were more concerned with seeing the child's point of view and were more concerned with other people and their reactions, rather than with material things. Further, the effective teachers had more concern for perceptual meanings than their colleagues who were judged to be less effective and were more process oriented.[22]

In a 1967 examination of the research that had been done on attitudes and perceptions of desirable traits and behaviors of teachers, Kerlinger and Pedhazur concluded that we do not really know what an effective teacher is like. "More than half a century of research effort has not yielded meaningful, measurable criteria around which the majority of the nation's educators can rally. No standards exist which are commonly agreed upon as the criteria of teacher effectiveness."[23]

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[22] Ibid.. p. 34-35

[23] F. N. Kerlinger and E. J. Pedhazur, Attitudes and Perceptions of Desirable Traits and Behavior of Teachers. (New York: University of New York, 1967). p. 29. ERIC Ed. 019 742.

Interaction Between Teacher and Pupil

In the Teacher Characteristics Study, a six year project completed by Ryans and staff in 1960, various dimensions of teacher attitude were explored, along with various aspects of teacher behavior. The researchers studied teacher attitudes toward children, toward other persons with whom teachers frequently come in contact, toward "democratic classroom practices."[24] They also attempted to identify and estimate the teachers' educational view-points, and how teacher attitudes were related to teacher performance in the classroom.[25]

Teacher attitudes were measured using a series of scales specifically designed for the Teacher Characteristics Study. A total of 191 items was selected and assembled into the instrument known as the Inventory of Teacher Opinion which used Likert-type responses. A sample of 240 teachers, stratified by years of teaching experience and grade level taught, was selected for the project.[26]

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[24]David G. Ryans, Characteristics of Teachers: Their Description, Comparision, and Appraisal (Washington D.C.: American Council on Education, 1960). p. 5-6.

[25]Ibid.. p. 137.

[26]Ibid.. p. 141

The results of this study indicated that elementary teachers, as a group, generally showed more favorable attitudes than did secondary teachers with respect to teacher attitude toward pupils and democratic pupil practices. Among elementary school teachers, those with less teaching experience tended to be more favorable toward democratic classroom procedures than did those with more experience, but age did not appear to be associated with the attitudes of the teachers studied.[27]

Teachers who were high on Characteristic X_o (sympathetic, understanding classroom behavior) expressed more favorable attitudes toward pupils and democratic procedures (Factor R) than did teachers who received lower assessments on Pattern X_o.[28]

To further the understanding of the relationship between motivation, as revealed in the teacher attitudes, and on-going teacher behavior in the school, a study was undertaken of the attitudes of teachers judged by their principals to be outstandingly superior or notably poor. Of the 600 school principals selected as representative of those throughout the United States, 200 were elementary school principals. Each of these principals passed along,

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[27]Ibid., p. 142

[28]Ibid., p. 143

without comment or reference to the nominating phase of the research, the Inventory of Teacher Opinion.[29]

In this phase of the study, the superior teachers were significantly (beyond the .01 level) more favorable in their opinions of pupils than were the low teachers. This was true among elementary teachers, as well as high school English and social studies teachers,[30] and high school mathematics and science teachers.

The significant finding of this part of the Teacher Characteristic Study lies in the strong indication that teaching behavior (based upon principals' judgments of outstandingly superior and notably poor teaching) and teacher attitudes toward pupils tend to be significantly related.[31]

When Rocchio and Kearney (1956) examined the relationship between the teachers' MTAI scores and the rate at which teachers gave failing grades to pupils, they concluded that teachers with undesirable teacher-pupil relations create an atmosphere of fear and tension among their students. These teachers think in terms of the subject matter to be covered rather than in terms of what the pupils need, feel, know, and can do. These teachers are

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[29] Ibid.. p. 145.

[30] Ibid.. p. 146.

[31] Ibid.. p. 146.

more likely to fail pupils than teachers who are able to maintain harmonious relations with their students and are able to treat their students more humanely. This study was done with 395 secondary school teachers in a midwestern city. Since it was possible that sex, age, and subject-matter field of the teacher might affect both the failure rate and its relation to the MTAI score, separate analyses of these factors were carried out.[32]

To further pursue the relationship between student acheivement and teacher attitudes, Della Piana and Gage (1955) hypothesized that pupils' liking of teachers is a functional part of the interaction between pupil values and teacher attitudes. Piana and Gage studied nine teachers of grades four to six and their 2,700 pupils. The teachers filled out the Minnesota Teachers Attitude Inventory. The students filled out the Leeds forced-choice instrument, My Teacher, which measured how much pupils desired teachers with cognitive ability as opposed to affective merit.

The authors found that for pupils who have stronger affective needs and values, the teachers' MTAI scores cor-

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[32]P. D. Rocchio and N. C. Kearney, "Teacher-Pupil Attitudes as Related to Non-promotion of Secondary School Pupils," Educational Psychological Measurement, 1956, No. 16. p. 251.

related more highly with how much they were liked by the pupils. They concluded that this study supports the interactional point of view in understanding teacher-pupil relationships. Concerning the MTAI, the authors stated that the MTAI will vary in validity for teacher effectiveness according to the cognitive or affective values of the pupils who are interacting with the teacher. Teachers who score high on the MTAI will probably be better liked by those pupils who have strong affective values concerning teachers. On the other hand, if the pupils have strong cognitive values, the teacher's MTAI will make less of a difference.[33]

In an effort to link teacher influence and pupil achievement, Ned Flanders (1965) in a Cooperative Research Project, used the technique of interaction analysis and was able to isolate teachers who had an above-average pattern of indirect influence. These teachers were found to be more flexible than those teachers who exerted below

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[33]G. M. Della Piana and N. G. Gage, "Pupils' Values and the Validity of the Minnesota Teacher Attitude Inventory," Journal of Educational Psychology, No. 46 (1955). p. 178.

average indirect influence.[34] Regarding student achievement, Flanders discovered that all types of students learned more while working with the more flexible teachers. Students of the more flexible teachers scored higher on the achievement tests in both content areas of mathematics and social studies which were measured for this project.[35]

Teacher Expectation of Students

Johnson, Feigenbaum and Weiby (1964) studied classroom performance of pupils, teacher attitude, and motivation in the classroom. They asked, "What are the cues (from a child's behavior) which form the basis for teachers' inferences of motivation or other causes underlying a child's behavior?" How is a teacher's subsequent behavior toward a child influenced by his perceptions of what guides, directs, or causes the child's behavior?" The basic problem here was to investigate some of the determinants and consequences of the teacher's perception of causation.[36]

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[34]N.A. Flanders, Teacher Influence, Pupil Attitudes, and Achievement (Cooperative Research Monograph No. 12, OE-25040: Washington, D.C., U.S. Department of Health, Education and Welfare, Office of Education, 1965), p. 1.

[35]Ibid.. p. 114.

[36]T. J. Johnson, R. Reigenbaum, and M. Weiby, "Some Determinants and Consequences of the Teacher's Perception of Causation," Journal of Educational Psychology, No. 55 (1964). p. 239.

The subjects were given fictitious cumulative folders containing the personal histories of students A and B. After the subjects familiarized themselves with these data they attempted to teach units in mathematics. The information in the student folders was slanted to picture a student as being either above or below average in intelligence, the assumption being that the teacher subjects would teach according to the judgments they had made about the students.

Johnson indicated that when a pupil does poorly on a task teachers will tend to perceive the cause of this performance as internal to the student and attribute negative characteristics to him, such as a low I.Q., poor home situation, or of a troublesome nature. If a student does well teachers will attribute positive characteristics about themselves. "I got after him," "I did a better job." When students who have done poorly in the past begin to show some improvement, teachers tend to perceive themselves as responsible or that the student cheated or copied.[37]

Rosenthal and Jacobson (1967) studied the effect that teacher expectation has on student achievement. In their study, 20 percent of the children in an elementary school were reported to their teachers as being ready to learn, as being children of great promise and potential. Actually

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[37]Ibid. p. 240.

these 20 percent of the student population had been chosen randomly from a heterogeneous group of elementary school children.[38]

This study took place in a public elementary school location in a lower-class community of a medium-size city. One-sixth of the school's population was Mexican children. The proposition that was tested was whether favorable expectations by teachers could lead to an increase in intellectural competence. In a pre-test and post-test situation, the "special" children showed 47 percent of their number had gained twenty or more total I.Q. points. The control group children gained also in I.Q., 19 percent of these children gained twenty or more total I.Q. points.[39]

It had been anticipated that favorable expectations on the part of teachers would be of greatest benefit to the children in the slow track of a three track system. This was not the case, however. After one year, the children of the medium track showed the greatest expectancy advantage, although children of the fast and slow tracks were close behind. After two years the children of the medium track very clearly showed the greater gains from having had favorable expectations on the part of their

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[38]R. Rosenthal and L. Jacobson, Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development (New York: Holt, Rinehart and Winston, Inc., 1968). p. vii-viii.

[39]Ibid.. p. 174-5.

teachers for their intellectual performance.[40]

In his study of Social Structure and Innovation in Elementary Schools, at the University of Michigan, Chesler (1966) dwelt on the need for extensive further study of teacher attitudes toward school, the students and their profession. Chesler also recommended that teacher values concerning their classrooms and the process of education should be explored, as well as teacher concern about mental health in the classroom.[41]

Effectiveness of Teacher Influence in Reading Programs

Federally financed Cooperative Research Projects have been a prolific source of enlightenment concerning the teaching of reading and the effectiveness of teachers. Twenty-seven cooperative first grade studies were inaugurated by the United States Office of Education in 1964-65.[42]

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[40] Ibid.. p. 176

[41] M. Chesler, "Social Structure and Innovation in Elementary Schools," Doctoral Dissertation (Washington, D.C., Educational Resources Information Center, U.S. Department of Health, Education and Welfare). p. 67. ERIC Ed. 014 817.

[42] A. S. Artley, "The Teacher Variable in the Teaching of Reading," (The Reading Teacher, December, 1969). p. 239.

Bond and Dykstra (1967) conducted the Cooperative Research Program in First Grade Reading Instruction in an endeavor to compare the relative effectiveness of basal programs and other innovative instructional programs, many of which belong to the code-emphasis category. Conventional basal programs, linguistic approaches, phonetic based programs, initial teaching alphabet, and language experience approaches were studied in twenty-seven individual research projects carried on in various places all over the United States.[43] The question to be investigated was, is there an approach to initial reading instruction that would produce superior reading and spelling achievement at the end of grade one?[44]

The first and second year phase of this first grade study appeared to support Jeanne Chall's conclusions concerning the superiority of code-emphasis programs in beginning reading.[45] However, there appeared to be no clear evidence that the early emphasis on code by itself is the primary reason for the apparent success. The study showed that children learned to read by a variety of

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[43] Ibid.. p. 239.

[44] Ibid.. p. 246.

[45] J. Chall, Learning to Read: The Great Debate (New York: McGraw-Hill, 1967). p. 210.

materials and methods, and that "no one approach is so distinctly better in all situations and respects than the others that it should be considered the one best method and the one used exclusively."[46] The authors went on to suggest that future research in reading might well center on teaching and learning characteristics, that to improve reading instruction it is necessary to train better teachers of reading rather than to expect materials to form a panacea.[47]

In the first grade phase of this study correlations between supervisor ratings or overall teacher effectiveness and class averages on reading tests ranged low, from .10 to .22.[48] When the five projects were compared which had obtained the best results with those five projects having the poorest results, the high-achieving projects had a greater percentage of teachers who had been given good ratings in class organization and structure, class participation, awareness of, and attention to individual needs and overall competence.[49]

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[46]G. L. Bond and R. Dykstra, "The Cooperative Research Program in First Grade Reading," (Reading Research Quarterly, Vol. 2, 1967). p. 210.

[47]Ibid.. p. 211.

[48]Ibid.. p. 195.

[49]Ibid.. p. 195.

Another Cooperative Research Project, the CRAFT Project, (Compared Reading Approaches in First-Grade Teaching) investigated the progress of reading of disadvantaged urban Negro children. This study was headed by Albert J. Harris in conjunction with the City University of New York and was conducted from 1964-1967. Harris used 1,141 children through the first grade, 656 children through the second grade, and 1,128 children in the third grade follow-up. A year later a replication study was undertaken in which 680 children participated through the first year, and 402 through the second grade.[50]

In this study, students were taught to read by two basic approaches: Skills-Centered and Language Experience. A Basal Reader Method and a Phono-visual Method constituted the Skills-Centered Approach. The Language Experience Approach was comprised of reading materials which were developed from experiences of the children coupled with audio-visual supplementation.[51]

The main finding of this study, which held for all five years, was that differences in class mean reading scores within each method were much larger than differ-

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[50]A. J. Harris and C. Morrison, "The CRAFT Project: A Final Report," The Reading Teacher, January, (1969). p. 335.

[51]Ibid., p. 335.

ences between the means for the approaches and the methods. There were no significant differences between the Skills-Centered Approach and the Language Experience Approach. Teachers in the project expressed the opinion that there is no one method by which all children will learn to read acceptably. They felt that teachers should attempt to determine the major strengths of a variety of reading methods, thereby developing their own mode of instruction.[52]

Teachers also believed that a strong relationship exists between a teacher's personality and the method with which she is successful in teaching. A minority of teachers expressed that attitude toward a particular method, rather than personality, effects teaching success.[53]

As in the Bond and Dykstra study, the authors of the CRAFT study concluded that the teacher is far more important than the method. They recommended that in-service workshops and expert consultative help be provided for all teachers, especially for beginning teachers of reading. Harris and Morrison also suggested further research to clarify teacher behavior as it is associated

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[52] Ibid.. p. 336.

[53] Ibid.. p. 338-9.

with achievement results of children.[54]

Sheldon, Stinson and Peebles (1964-66) also investigated beginning reading methods and materials through a Cooperative Research grant. At the end of two years instruction, it was reported that all three methods investigated were equally effective in teaching children to read.[55] A survey of classrooms and interviews with teachers indicated a concern for the disabled reader. However, the teacher variable was found to be the most important factor in determining the efficacy of any program of reading instruction; that responsibility for effective instruction finally rests with the teacher.[56]

Ramsey (1962), after an evaluation of three grouping procedures for teaching reading came to a similar conclusion that, "The thing that the study probably illustrates most clearly is that the influence of the teacher is greater than that of a particular method, a certain variety of materials, or a specific plan or organization. Given a good teacher, other factors in teaching reading

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[54] Ibid.. p. 339.

[55] W. D. Sheldon, F. Stinson, and J. D. Peebles, "Comparision of Three Methods of Reading: A Continuation Study in the Third Grade," The Reading Teacher (March, 1969). p. 539.

tend to pale to insignificance."[57]

In the four studies just discussed, the importance of the teacher variable came as a by-product for researchers who were studying methods of beginning reading. Other authors have studied directly teacher influence in the teaching of reading. Soar (1965), through a pre-and post test situation in fifty-six classrooms of grade 3-6 children, attempted to determine the effect of exhibited teacher control and emotional climate in the classroom on students' growth in vocabulary and reading. Using the Iowa Tests of Basic Skills to measure progress in reading and vocabulary, and using the Flanders Interaction Analysis Scale to measure emotional climate and teacher control, Soar found that a combination of indirect teaching with a low hostility climate produced the greatest gains in vocabulary growth. For growth in reading, a combination of indirect control and high hostility gave the most gains.[58]

Lipton (1969), at Pennsylvania State University,

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[57]W. S. Ramsey, "An Evaluation of Three Methods of Teaching," Challenge and Experiment in Reading, ed., A. Figurel (Newark, Delaware: International Reading Association Press, 1962). p. 153.

[58]R. S. Soar, "Pupil Needs and Teacher-pupil Relationships," Reading and Inquiry, ed. J. A. Figurel (Newark, Delaware: International Reading Association Press, 1965). p. 53.

investigated whether children with reading disability demonstrate different rates of reading achievement in relation to the degree to which their teachers manifest social and cognitive rigidity. The author hypothesized there would be a significant positive relationship between teachers' social rigidity and cognitive rigidity patterns. This relationship was hypothesized because Lipton had found that other research had indicated a correlation of .65 between the F-Scale and the Dogmatism Scale which he wished to use in his study. White teachers, grade 3-6, in the New York School System were administered the F-Scale and the Dogmatism Scale. From 800 children who read one year below grade level, 159 were selected who met the intelligence requirement, within one standard deviation of the mean. Children were re-tested at the end of the school year.[59]

Although no significant relationships were found between social rigidity and combined social and cognitive rigidity patterns of teachers and the reading achievement gains of retarded readers, significant differences were established between cognitive rigidity patterns of teachers and reading achievement of retarded readers.

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[59]A. Lipton, "Relationship of Teacher Rigidity to Progress of Retarded Readers," Reading and Realism (Newark, Delaware: International Reading Association Press, 1969). p. 758.

Lipton suggested there is much more that can be studied concerning teacher training and other social or cognitive rigidity patterns which were not measured by either of the scales he used.[60]

In studying the effectiveness of an intensive in-service program upon a teacher's classroom behavior and upon the reading achievement of pupils taught by these teachers, Heilman (1966) found that statistically significant differences favored the fourteen experimental grade one teachers who attended extended in-service training. The data showed that the experimental treatment appeared to have a favorable effect upon boys' reading achievement. Participating teachers listed eighty-six changes in teaching procedures, ninety-seven modifications of concepts relating to reading instruction and the reading of numerous professional materials.[61]

Summary

The effectiveness of the classroom teacher in the teaching of reading skills has been established by recent and reliable government-funded research programs. Various traditional and innovative methods and materials were used

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[60] Ibid., p. 763.

[61] A. W. Heilman, "Effects of an Intensive In-service Program on Teacher Classroom Behavior and Pupil Reading Achievement," The Reading Teacher (Vol. 19, 1966). p. 624.

with elementary school students of varying socio-economic backgrounds, in an effort to discover some indications of which materials or methods are most effective in teaching reading skills. No one method or material stood out as being clearly superior over other options, to merit its being recommended for general use in elementary school reading programs.

Instead, the teacher variable appeared to be the one most important factor in the effectiveness of any material or method. The studies suggested that future research in reading might well center on the teacher and learning characteristics that lead to improvement in reading. Given a good teacher, other factors in the teaching of reading appear to be less significant.

When one searches for clues as to what are the significant, reliable relationships between students and teachers, or what are the specific and distinctive features of the personality of an effective teacher, there appear to be few definitive research findings which can be utilized. There is an indication that more abstract teachers appear to differ from concrete teachers in their teaching approaches and in the classroom atmospheres they generate. Abstract teachers are more flexible, variant, and are less structured toward children. They also appear to require more information about students as they attempt to work with them.

Definite dimensions of teacher belief, which are expressed with sufficient regularity and emphasis, can be identified with a high amount of certainty. These dimensions are subject-matter emphasis, personal adjustment ideology, student autonomy, emotional disengagement, student viewpoint, classroom order, student challenge and integrative learning. These belief dimensions were not established as being held by effective or ineffective teachers, or as being held in any greater or lesser degree by teachers of varying effectiveness. They were established merely as being present within the belief systems of most teachers.

A relationship was established between the perceptual organizations of teacher subjects, as inferred from observations and interviews, and the academic achievement of students. Effective and ineffective teachers were identified as having characteristically different perceptual organizations. Effective teachers tended to be concerned with people rather than with things. They were friendly, helpful and considered others to be worthy. Effective teachers were also concerned with other people and their reactions, rather than with material things.

Superior teachers, as measured by student achievement instruments, appeared to be more favorable in their opinions of students than were teachers whose students achieved less well. There is a strong indication that

teaching behavior and teacher attitudes toward students tend to be significantly related. Teachers who consistently gave failing grades to students were found to rate lower on the MTAI than those teachers who rated higher in the percentile ranking. All types of students were found to learn more while working with more flexible teachers, those who had an above-average pattern of indirect influence on their students.

Teacher expectation of students appears to be an important influence on student achievement in the classroom. Student I.Q. as measured by standard intelligence tests, improved as teachers' expectations were more positive and encouraging.

The findings concerning student achievement and teacher attitude can be summarized as follows:

1. The classroom teacher is a stronger influence than materials or methods when elementary school students are learning reading skills.

2. More than fifty years of research effort has yielded little concrete information concerning the characteristics of an effective teacher.

3. Effective teachers have characteristically different perceptual organizations than less effective teachers.

4. Effective teachers appear to be more concerned with students as people, are more flexible, maintain more

harmonious relations with the students, have an above-average pattern of indirect influence on their students, and expect greater achievement from their students.

CHAPTER III

ANALYSIS OF DATA

Introduction

Chapter III has been divided into two sections. The first part of the chapter is concerned with descriptive data of the teachers and the students used in this study. The descriptive data include MTAI test scores of the teachers, their sex, highest degree held, and their teaching experience. The results of the 30-item questionnaire are given together with the correlation results between the MTAI and the teachers' responses on the 30-item questionnaire.

The student data included in this chapter contain an overview of the sex and I.Q. of the students who have the High Attitude Teachers, and similar information for those students who have the Low Attitude Teachers. The length of residence of the students and their stage in the family cycle are also given.

The second section of this chapter describes the inferential statistical data obtained from computer calculations. These data include the analysis of covariance which was used to test the hypotheses, as well as the significance of related variables. A correlation of pre-test and post test data can be found in Appendix B.

Descriptive Data

Teachers

MTAI.--The population from which the sample teachers were chosen was a group of forty-five sixth grade teachers from nineteen elementary schools in the Utica Community School District. At the outset, it was decided to eliminate those teachers and those classrooms which were involved in innovative, experimental, or federally funded programs. The variables represented within these classrooms were considered to be too diverse to control or to measure comparatively. Thirteen teachers and classrooms were thus eliminated from the study, leaving a testable population of thirty-two classrooms and teachers.

The sample teachers were divided into two main groups, High Attitude Teacher group, and Low Attitude Teacher group. Ten teachers comprised each of these groups, thus providing a total of twenty teachers. These two sample groups of teachers had been determined by the MTAI, the ten teachers who rated highest and lowest. The teachers had taken the MTAI during the first two weeks in May, 1970, at the same time that the students were being given the post ITBS tests. The middle or remaining twelve teachers comprised a third sample sub-group. These middle attitude teachers were those who were neither high nor low in the percentile ranking of the MTAI, but who, because of

their responses on the 30-item questionnaire, were used to test hypotheses 4, 5, and 6. (See Table 1)

The MTAI was submitted to the Psychological Corporation in New York for professional checking and ranking. The percentile rank equivalents for raw scores were those contained in Table 2 of the MTAI Manual, which applied to elementary teachers who were experienced, who had four years of training, and who were employed in a school system with twenty-one or more teachers.[62]

As shown in Table 2, the thirty-two teachers listed obtained raw scores from +99 to -43, a range of 142 points. The possible range of the MTAI is 164, from +114 to -50, with a standard deviation of 36.7.[63] The median raw score of the thirty-two teachers was 52, as was the mode. The mean raw score of 39.969 indicates an influence of the predominance of scores toward the bottom of the scale. The raw score distribution is skewed negatively.

The ten High Attitude Teachers had a range of 41, from +99 to +58. The Low Attitude Teachers had a range of 66, from +23 to -43. As was indicated earlier in this

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[62]Table 2 Percentile Rank Equivalents from Raw Scores on the MTAI, Form A, from Minnesota Teacher Attitude Inventory Manual (New York: Psychological Corporation, 1955). p. 9.

[63]Walter W. Cook, Carroll H. Leeds, and Robert Callis. Minnesota Teacher Attitude Inventory Manual (New York: The Psychological Corporation, 1965). p. 7.

TABLE 1

MINNESOTA TEACHER ATTITUDE INVENTORY RAW SCORES AND PERCENTILE RANK

Teacher	Raw Score	Percentile Rank
	High Attitude Teachers	
Q-2	99	88
L-1	83	75
A-2	73	65
N-2	71	60
C-1	68	65
S-1	66	65
S-3	60	50
H-2	60	50
N-1	59	45
M-2	58	45
	Middle Attitude Teachers	
S-2	57	45
M-1	57	45
I-2	54	45
F-1	53	45
R-1	52	45
L-2	52	45
D-3	52	45
H-1	49	40
C-3	49	40
O-2	48	40
C-2	41	30
A-3	39	30
	Low Attitude Teachers	
F-3	23	20
D-1	15	20
Q-3	14	20
O-1	10	15
A-1	06	10
I-1	-03	05
L-3	-04	05
F-2	-08	05
Q-1	-31	01
D-2	-43	01

study, the identity of the teachers in both the High Attitude Teacher group and the Low Attitude Teacher group has been concealed by the use of code numbers. The identity of individual schools, as they appear here, has also been concealed by the use of code letters. This precaution was undertaken at the beginning of the post-testing sessions in the interest of protecting the teachers who were involved in this study.

TABLE 2

FREQUENCY DISTRIBUTION OF MTAI SCORES

Raw Scores	Frequency
105 to 91	1
90 to 76	1
75 to 61	4
60 to 46	14
45 to 31	2
30 to 16	1
15 to 0	4
0 to 15	3
-16 to -30	0
-31 to -45	2
Number of teachers	32
Class interval	15
Mean	36.969
Median	52
Mode	52
S.D.	32.40
Range	142

An analysis of the descriptive data of the ten High Attitude Teachers and the ten Low Attitude Teachers shows that seven teachers of each group are male. Three of the

High Attitude Teachers hold Master of Arts degrees while only one of the Low Attitude Teachers holds such a degree. Four of the High Attitude Teachers have taught five or more years, while five of the Low Attitude Teachers have five or more years of teaching experience.

There appears to be no indication in these data that sex, highest degree held, or years of experience in teaching children, are predominant characteristics of either High Attitude or Low Attitude Teachers. From this analysis it is assumed that attitude of the teacher toward students is a variable independent of sex, the teacher's formal education, or his years of teaching experience. (See Table 3)

30-item questionnaire.--The questionnaire which the writer asked each sixth grade teacher to answer was divided into three areas on a Likert-type scale. The areas were attitude toward students, attitude toward reading, and attitude toward curriculum. This questionnaire was scored by the writer who considered each of the above areas an independent score. At no time was a combined score of the three areas computed or used in the study.

The scores of the 30-item questionnaire were correlated with the scores of the MTAI for the ten High Attitude Teachers and the ten Low Attitude Teachers. The Spearman Rank correlation method (rho) was used. (See Table 4)

TABLE 3

SEX, HIGHEST DEGREE HELD, AND YEARS OF TEACHING EXPERIENCE OF HIGH ATTITUDE AND LOW ATTITUDE TEACHERS

Teacher	Sex	Highest Degree	Experience
	<u>High Attitude Teachers</u>		
Q-2	Male	M.A.	Under 5 years
L-1	Male	B.A.	Under 5 years
A-2	Female	B.A.	Under 5 years
N-2	Female	M.A.	5 years or more
M-2	Male	B.A.	Under 5 years
C-1	Male	B.A.	Under 5 years
S-1	Male	B.A.	5 years or more
S-3	Female	B.A.	5 years or more
N-1	Male	B.A.	Under 5 years
H-2	Male	M.A.	5 years or more
	<u>Low Attitude Teachers</u>		
F-3	Male	B.A.	5 years or more
Q-3	Female	B.A.	Under 5 years
O-1	Female	B.A.	5 years or more
A-1	Male	B.A.	Under 5 years
I-1	Male	B.A.	5 years or more
D-1	Female	B.A.	Under 5 years
F-2	Male	B.A.	Under 5 years
Q-1	Male	B.A.	5 years or more
L-3	Male	M.A.	Under 5 years
D-2	Male	B.A.	5 years or more

TABLE 4

LISTING OF TEACHERS AND THEIR RANK ORDER RESPONSES TO THE MTAI AND THE THREE AREAS MEASURED IN 30-ITEM QUESTIONNAIRE

Teacher	MTAI	Attitude toward Students	Attitude toward Reading	Attitude toward Curriculum
		Rank Order Responses		
Q-2	1	5	29	6.5
L-1	2	5	8.5	1.5
A-2	3	13.5	10	18
N-2	4	9	2	24
C-1	5	7	12	11.5
S-1	6	17	32	4.5
S-3	7.5	3	1	32
H-2	7.5	21	12	18
N-1	9	5	29	14.5
M-2	10	1.5	16.5	1.5
S-2	11.5	11.5	24.5	27
M-1	11.5	30	21	24
I-2	13	23	16.5	14.5
F-1	14	27	8.5	4.5
F-1	16	11.5	24.5	3
R-1	16	30	12	30.5
D-3	16	30	16.5	8.5
H-1	18.5	1.5	4.5	8.5
C-3	18.5	25	4.5	24
O-2	20	17	24.5	6.5
C-2	21	21	24.5	21
A-3	22	17	29	14.5
F-3	23	21	21	14.5
D-1	24	9	3	21
Q-3	25	17	7	29
O-1	26	13.5	21	27
A-1	27	17	16.5	10
I-1	28	27	29	27
L-3	29	9	6	30.5
F-2	30	27	16.5	11.5
Q-1	31	32	29	21
D-2	32	24	16.5	18

Correlation between responses

Between MTAI and teacher attitude toward students .489*
Between MTAI and teacher attitude toward reading .112
Between MTAI and teacher attitude toward curriculum .298
*Significant at the .01 level

The data presented in Table 4 indicate that the responses the teachers made on the MTAI were significantly similar to the responses they made on the 30-item questionnaire in the area of their attitude toward students. There is no significant correlation indicated between the teachers' responses on the 30-item questionnaire in the areas of attitude toward reading and toward curriculum, and their attitude toward students as indicated by the MTAI. In computing this correlation, the responses of all thirty-two teachers were used to test hypotheses 4, 5, and 6. These three hypotheses dealt with responses to the 30-item questionnaire.

It is interesting to note that of the ten teachers who had scored highest on the MTAI attitude toward students, seven of them also scored highest on the 30-item questionnaire in area of attitude toward students. However, of the ten teachers who had scored lowest on the MTAI, only four of them also scored lowest on the 30-item questionnaire in attitude toward students.

In Appendix A there is a copy of the original 30-item questionnaire. Appendix C contains a listing of the questions of the 30-item questionnaire showing the mean responses of the teachers.

Students

There were 1291 sixth grade students in the Utica Community School District which comprised the population

from which the sample 475 students were chosen. The ten teachers who had rated highest on the MTAI were designated the High Attitude Teacher group, and their students the student sample. There were 239 students in the High Attitude Teacher group. The ten teachers who had rated lowest on the MTAI were designated the Low Attitude Teacher group with 236 students. In order for a student to qualify as part of the student sample it was necessary for all data to be complete concerning him, an I.Q. score, pre-test and post-test data from the reading vocabulary and reading comprehension sections of the ITBS, length of residence in his school community, and his stage in the family cycle. The I.Q. data were taken from the computer print-out sheets available at the Utica Community School Offices, the Lorge-Thorndike Test of Mental Maturity administered when these students were in the fifth grade. The pre-test data were taken from the computer print-out sheets also available at the Utica Community School Office. The ITBS had been administered to these students during the fall of 1969 as part of the school district testing program. Length of residence and stage in the family cycle data were obtained by the writer and graduate assistants at the time of the ITBS post-testing.

Sex of student sample.--In analyzing the sex make-up of the two sample groups of students, it is apparent that numerically the High Attitude Teacher students and the Low

Attitude Teacher students differ by only three students, that is, the High Attitude Teacher group has 239 students, while the Low Attitude Teacher group has 236 students. The High Attitude Teacher group has one more boy student than the Low Attitude Teacher group, and two more girl students. (See Table 5)

TABLE 5

SEX OF STUDENT SAMPLE

Teacher	Number of Boys	Number of Girls	Total
	High Attitude Teachers		
Q-2	9	13	22
L-1	11	12	23
A-2	11	12	23
N-2	11	12	23
M-2	18	9	27
C-1	12	10	22
S-1	14	13	27
S-3	14	13	27
N-1	9	13	22
H-2	16	7	23
Total	125	114	239
	Low Attitude Teachers		
F-3	10	10	20
Q-3	11	13	24
O-1	11	12	23
A-1	10	13	23
I-1	19	8	27
D-1	16	14	30
F-2	14	6	20
Q-1	11	9	20
L-3	9	15	24
D-2	13	12	25
Total	124	112	236

I.Q. scores of student sample.--The I.Q. means of the students who have the High Attitude Teachers and those who have the Low Attitude Teachers vary by small differences. (See Table 6)

TABLE 6

I.Q. SCORES OF STUDENT SAMPLE

Teacher	Boys I.Q.Mean	Girls I.Q. Mean	Total I.Q.Mean
	High Attitude Teachers		
Q-2	105.89	103.46	104.45
L-1	97.18	100.25	98.78
A-2	102.90	101.66	102.26
N-2	102.09	109.16	105.78
M-2	102.44	107.11	104.00
C-1	104.00	108.20	105.90
S-1	106.36	106.85	106.59
S-3	99.21	107.23	103.07
N-1	105.22	103.00	103.91
H-2	107.25	110.30	108.17
Mean	103.15	105.72	104.29
	Low Attitude Teachers		
F-3	97.9	103.1	100.5
Q-3	94.73	107.54	101.67
O-1	104.36	103.96	103.96
A-1	105.90	109.69	108.04
I-1	97.10	103.50	98.9
D-1	97.31	102.28	99.63
F-2	111.28	106.40	108.40
Q-1	108.00	100.67	104.70
L-3	95.00	104.87	101.17
D-2	102.76	107.08	104.84
Mean	101.43	104.001	103.18

The mean I.Q. for the High Attitude Teacher boys differs from the mean I.Q. for the Low Attitude Teacher boys by 1.72. The mean I.Q. for the High Attitude Teacher girls differs from the mean I.Q. for the Low Attitude Teacher girls by .82. The mean I.Q. for the total group of High Attitude Teacher students differs 1.11 from the mean I.Q. for the total group of Low Attitude Teacher students.

Length of residence of sample students.--The original plan for the research design of this study was to have three categories for the length of residence of the sixth grade students. These categories were, less than one year, more than one year but less than five, and more than five years. The category, less than one year, was eliminated from the study as all those students who had lived in the Utica Community School District area for less than one year did not have an I.Q. score which could be used. Two categories were then used, less than five years and more than five years. In this research project, length of residence referred to the length of time a student had lived within a particular school attendance area.

There is little difference in the length of residence of the two main groups of students. The number of students who have lived in the school district for a shorter or a longer time is about equal for both the High Attitude Teacher group and the Low Attitude Teacher group. (See Table 7)

TABLE 7

TH OF RESIDENCE OF SAMPLE STUDENTS

Student Group	N	Less than 5 years	More than 5 years
High Attitude	239	95	144
Middle Attitude*	295	159	138
Low Attitude	236	94	141
Total	770	346	424

*Those teachers who were neither in the High Attitude or Low Attitude Teacher group.

Stage in the family cycle of sample students.--

Three categories were considered here, they were oldest, middle, and youngest. The information from the students in regard to their length of residence and their stage in the family cycle were obtained from the students on the day they were given the post ITBS test in May, 1970. (See Table 8)

TABLE 8

STAGE IN THE FAMILY CYCLE OF SAMPLE STUDENTS

Student group	N	Oldest Stage	Middle Stage	Youngest Stage
High Attitude Teacher	239	91	114	54
Middle Attitude Teacher*	295	93	130	72
Low Attitude Teacher	236	72	100	64
Total	771	256	324	190

*Those teachers who were in neither the High Attitude or Low Attitude group.

The distribution of students who represent the three stages of the family cycle varies in the first stage more than in the other stages. There is indication

that more students who are oldest children in the family are in the High Attitude Teacher group, nineteen more than are in the Low Attitude Teacher group. The Low Attitude Teacher group contains more middle and last stage children, sixteen more in the two stages combined than in the High Attitude group.

Education level of students' parents.--Three factors were considered to be important enough to be considered as contributing variables to students' achievement in reading, and which were capable of being measured for this study. They were stage in the family cycle, length of residence, and education level of parents. A questionnaire was developed to obtain this information from the students. However, on the first day of testing in May, 1970, the writer as well as the assistant test administrator, discovered that the students had great difficulty in filling out this area of the questionnaire. Since this study was being administered during the first Michigan Assessment Testing year, which had created considerable concern within school districts due to the nature of the socio-economic questions asked, it was decided to delete the information concerning education level of parents. Two other avenues, school records and census tract data proved inadequate. School records did not contain this information and census tract data were out-dated.

Inferential Data

Procedures Used

Analysis of covariance.--The analysis of covariance was used to analyze the achievement of the students who had High or Low Attitude Teachers in the areas of reading vocabulary, reading comprehension, and average reading scores. The reading achievement of the two student groups who had High or Low Attitude Teachers was measured by the grade level difference between their pre- and post- ITBS mean scores. The pre-test score was used as a covariate to adjust for differences in pre-test scores, and to make this a test of achievement during this period.

Correlation of pre- and post-data.--A correlation between the pre- and post-test data of the student responses on the ITBS was calculated. This correlation was run in each reading area tested, reading vocabulary, reading comprehension, and average reading scores. The purpose of the correlation was to determine student response consistency in the pre- and post-testing. In all instances this correlation was positive and above .70, thus indicating a high degree of consistency on the part of the students. A copy of these correlation data can be found in Appendix B.

Grouping of data for testing.--In order to investigate the relationship between teacher attitude and

student achievement in reading when the students were grouped according to their sex, I.Q., length of residence, and stage in the family cycle, the analysis of covariance was run four times. In each run the two main groups of students, those who had the High Attitude Teachers and those who had the Low Attitude Teachers, were re-grouped according to these four variables. Their group mean achievement was then computed using a 2 x 2 matrix for sex, I.Q., and length of residence. A 2 x 3 matrix was used for stage in the family cycle.

To analyze student achievement when students were divided into sex groups, the High Attitude Teacher group of students was divided into boys and girls, as was the Low Attitude Teacher group.

To analyze student achievement when students were divided into I.Q. groups, an arbitrary division in the student I.Q. scores was made. Those students who had registered an I.Q. of 105 or higher were placed in the higher I.Q. group. Those students who had an I.Q. of 104 or lower, were placed in the lower I.Q. group. The High Attitude Teacher group of students was therefore divided into high and low I.Q. students, as was the group of Low Attitude Teacher students.

To re-group the student sample according to their length of residence, the students were divided into two residence designations, those who had lived in their

present school community less than five years, and those who had lived in their school community more than five years. The students were then placed into their High or Low Attitude Teacher group for the purpose of analyzing their reading achievement in relation to their teachers' attitude toward them.

Three stages in the family cycle were used to analyze student achievement and teacher attitude; they were oldest, middle, or youngest Stage. This information, as well as length of residence information, was taken from the student questionnaire which had been given to the sixth grade students when they were administered the post-ITBS in May, 1970. A copy of this questionnaire can be found in Appendix B. All of the students of the High and Low Attitude Teacher groups were thus re-grouped, and their reading achievement analyzed in the three areas of reading vocabulary, reading comprehension, and average reading scores.

Teacher Attitude and Student Achievement in Reading Vocabulary

The students who had the High Attitude Teachers achieved better in reading vocabulary than did the students who had the Low Attitude Teachers. In each re-grouping of the students according to sex, I.Q., length of residence, and stage in the family cycle, the High Attitude Teacher group achieved better, however, according to the F ratio the achievement is not significant. Teacher attitude is

not established as the significant variable when students are learning vocabulary skills in reading. (See Table 9)

Teacher Attitude and Student Achievement in Reading Comprehension

The pre-testing of the ITBS had been done in the fall of 1969, the post-testing was done the following May, 1970. The time between these two dates is approximately six months. A student who progressed moderately well should have shown a six-month gain in grade level achievement. When the data are analyzed for student achievement in reading comprehension, it is apparent that the students who had the High Attitude Teachers achieved significantly better than did the students who had the Low Attitude Teachers. The F-ratio indicates a significant difference between the High Attitude Teacher group of students and the Low Attitude Teacher group. (See Table 10)

These data show that regardless of how the reading comprehension scores are grouped, there was a substantially better gain made by the High Attitude Teacher students, and this gain within a period of six-months of school. Teacher attitude toward students does appear to be a significant factor when students are learning the cognitive skill of reading comprehension.

TABLE 9

READING VOCABULARY MEAN SCORES* OF HIGH AND LOW ATTITUDE TEACHER GROUPS WHEN STUDENTS ARE GROUPED ACCORDING TO SEX, I.Q., LENGTH OF RESIDENCE, AND STAGE IN THE FAMILY CYCLE

Group	N	Pre-ITBS Mean	Post-ITBS Mean	Adjusted Mean	F-Ratio
		Variable of Sex			
High Attitude Boys	125	6.436	6.782	6.700	
High Attitude Girls	114	6.229	6.729	6.816	
Low Attitude Boys	124	6.404	6.675	6.620	
Low Attitude Girls	112	6.257	6.561	6.626	3.148 N.S.
		Variable of I.Q.			
High Attitude High I.Q.	128	6.945	7.391	6.952	
High Attitude Low I.Q.	111	5.637	6.025	6.529	
Low Attitude High I.Q.	106	7.104	7.456	6.901	
Low Attitude Low I.Q.	130	5.707	5.942	6.395	1.541 N.S.
		Variable of Length of Residence			
High Attitude 5 years +	95	6.347	6.795	6.817	
High Attitude 5 years -	144	6.330	6.731	6.766	
Low Attitude 5 years +	94	6.403	6.723	6.700	
Low Attitude 5 years -	142	6.460	6.740	6.672	1.568 N.S.
		Variable of Stage in the Family Cycle			
High Attitude Oldest Stage	91	6.516	7.010	6.809	
High Attitude Middle Stage	94	6.246	6.568	6.745	
High Attitude Youngest Stage	54	6.192	6.657	6.681	
Low Attitude Oldest Stage	73	6.471	6.686	6.559	
Low Attitude Middle Stage	99	6.183	6.476	6.625	
Low Attitude Youngest Stage	64	6.410	6.771	6.691	2.447 N.S.

*Means are reported in grade level.

TABLE 10

READING COMPREHENSION MEAN SCORES OF HIGH AND LOW ATTITUDE TEACHER GROUPS WHEN STUDENTS ARE GROUPED ACCORDING TO SEX, I.Q., LENGTH OF RESIDENCE, AND STAGE IN THE FAMILY CYCLE

Group	N	Pre ITBS Mean	Post ITBS Mean	Adjusted Mean	F-Ratio
		Variable of Sex			
High Attitude Boys	125	6.212	6.320	6.319	
High Attitude Girls	114	6.238	6.575	6.555	
Low Attitude Boys	124	6.154	6.118	6.161	
Low Attitude Girls	112	6.246	6.190	6.164	9.432**
		Variable of I.Q.			
High Attitude High I.Q.	128	6.813	7.092	6.703	
High Attitude Low I.Q.	111	5.546	5.691	6.121	
Low Attitude High I.Q.	106	7.030	6.987	6.458	
Low Attitude Low I.Q.	130	5.519	5.471	5.919	6.585*
		Variable of Length of Residence			
High Attitude 5 years +	95	6.185	6.521	6.559	
High Attitude 5 years -	144	6.250	6.389	6.378	
Low Attitude 5 years +	94	6.211	6.293	6.311	
Low Attitude 5 years -	142	6.301	6.141	6.091	7.566**
		Variable of Stage in the Family Cycle			
High Attitude Oldest Stage	91	6.453	6.708	6.464	
High Attitude Middle Stage	94	6.128	6.245	6.425	
High Attitude Youngest Stage	54	6.003	6.333	6.386	
Low Attitude Oldest Stage	73	6.328	6.205	6.113	
Low Attitude Middle Stage	99	6.111	6.083	6.164	
Low Attitude Youngest Stage	64	6.182	6.198	6.215	8.326**

* Significant at .05 level
**Significant at .01 level

Teacher Attitude and Student Achievement in Average Reading Scores

An average reading score for each student was obtained by computing the mean between the pre-test reading vocabulary and reading comprehension scores, and the post-test reading vocabulary and reading comprehension scores. In analyzing the data for the pre- and post-testing of the students, the High Attitude Teacher group of students made a significant gain over their fellow-students who had the Low Attitude Teachers in average reading scores. (See Table 11)

The attitude of the teachers toward students appears to be a significant variable in learning reading skills at the .01 level when students are grouped according to their sex. Attitude of teachers is significant in the other variable groupings of I.Q., Length of Residence, and Stage in the Family Cycle, but at the .05 level.

Interaction Effect Indicated by The Analysis of Covariance

The purpose of the two-way analysis of covariance, split according to different factors, was to see if the effect of teachers' attitude on reading was related to these other factors; that is, was the difference in reading achievement between High and Low Attitude Teachers the same for boys as for girls, for high I.Q. students as for low I.Q. students, for students who had lived in their school community longer, as for those who had lived there

TABLE 11

AVERAGE READING SCORES OF HIGH AND LOW ATTITUDE TEACHER GROUPS WHEN STUDENTS ARE GROUPED ACCORDING TO SEX, I.Q., LENGTH OF RESIDENCE, AND STAGE IN THE FAMILY CYCLE

Group	N	Pre ITBS Mean	Post ITBS Mean	Adjusted Mean	F-Ratio
		Variable of Sex			
High Attitude Boys	124	6.345	6.577	6.532	
High Attitude Girls	114	6.269	6.655	6.673	
Low Attitude Boys	124	6.288	5.421	6.425	
Low Attitude Girls	112	6.258	6.398	6.426	6.8232**
		Variable of I.Q.			
High Attitude High I.Q.	128	6.908	7.243	6.783	
High Attitude Low I.Q.	111	5.618	5.888	6.390	
Low Attitude High I.Q.	106	7.073	7.242	6.659	
Low Attitude Low I.Q.	130	5.621	5.732	6.232	4.545*
		Variable of Length of Residence			
High Attitude 5 years +	95	6.280	6.651	6.688	
High Attitude 5 years -	144	6.328	6.589	6.586	
Low Attitude 5 years +	94	6.289	6.534	6.563	
Low Attitude 5 years -	142	6.418	6.464	6.386	4.883*
		Variable of Stage in the Family Cycle			
High Attitude Oldest Stage	91	6.523	6.891	6.641	
High Attitude Middle Stage	94	6.210	6.412	6.592	
High Attitude Youngest Stage	54	6.120	6.498	6.543	
Low Attitude Oldest Stage	73	6.387	6.469	6.380	
Low Attitude Middle Stage	99	6.159	6.304	6.427	
Low Attitude Youngest Stage	64	6.320	6.507	6.473	5.777*

**Significant at .01 level
*Significant at .05 level

TABLE 12

INTERACTION OF OTHER FACTORS WITH TEACHER ATTITUDE IN AFFECTING READING ACHIEVEMENT

Interaction Factors	F-Ratio	Significance
Reading Vocabulary		
Sex of Student - Teacher Attitude	.52	N.S.
Student I.Q. - Teacher Attitude	.31	N.S.
Length of Residence - Teacher Attitude	.18	N.S.
Stage in Family Cycle - Teacher Attitude	1.69	N.S.
Reading Comprehension		
Sex of Student - Teacher Attitude	1.69	N.S.
Student I.Q. - Teacher Attitude	.58	N.S.
Length of Residence - Teacher Attitude	.42	N.S.
Stage in Family Cycle - Teacher Attitude	.59	N.S.
Average Reading Scores		
Sex of Student - Teacher Attitude	1.08	N.S.
Student I.Q. - Teacher Attitude	.67	N.S.
Length of Residence - Teacher Attitude	.26	N.S.
Stage in Family Cycle - Teacher Attitude	1.13	N.S.

a shorter time, and for students who were first in their family cycle as for students who were last?

This is shown by the interaction effect of the analysis of covariance table. (See Table 12) These data do not show any statistically significant relation between the four variables of sex, I.Q., length of residence, and stage in the family cycle, and the effect of teacher attitude on reading achievement.

Summary of Relationship Between High and Low Attitude Teachers and Reading Achievement

The purpose of this study had been to investigate the relationship between student achievement in reading and the attitude of the students' classroom teacher. The writer had anticipated that some relationship would be shown because the review of the literature had indicated the importance of the teacher in student learning. However, the writer had not expected to find a relationship established strongly in one area of reading development but not in another. The data presented show that the group of High Attitude Teacher students achieved better than the Low Attitude Teacher students. In the areas of reading comprehension and in the average reading scores this relationship was established as being significant to the learning of students, but not in the area of reading vocabulary.

The implication here could very well be that students can learn the mechanics of reading by many means, teaching

machines, lay-helpers, or trained teachers, as attitude is apparently not the significant variable. However, when a cognitive skill of understanding and interpreting the reading is concerned, the attitude of the teacher is highly significant. When this thought is translated to the modern trend of performance contracting, it is possible to understand that students can learn to word-call, to learn vocabulary, to analyze and synthesize words with extrinsic motivation. When students are asked to think about what they are reading, to make judgments, inferences and to interpret, the teacher is important. Evidence in this study seem to indicate that students who have teachers with a high degree of positive attitude toward them will achieve better in the cognitive skill of comprehension.

30-item Questionnaire

Areas of attitude studied.--In the 30-item questionnaire, three areas of teacher attitude were investigated, teacher attitude toward students, toward the teaching of reading, and toward school curriculum. The weighted responses of these three areas were treated independently so that the teacher sample of each area was comprised of a different set of High Attitude and Low Attitude Teachers. The ten High Attitude Teachers and the ten Low Attitude Teachers of each area comprised the teacher sample for testing the achievement of their students.

The purpose of this section of the study was to in-

vestigate whether there would be a significant relationship shown between teacher attitude as indicated by their responses on the three areas of the 30-item questionnaire and student achievement in reading. (See Table 13)

Findings of 30-item questionnaire teacher groups.-- All thirty-two teachers who took the MTAI and whose classes were pre- and post-tested also responded to the 30-item questionnaire. When the ten high attitude and ten low attitude teachers were designated in each area of attitude tested in the 30-item questionnaire, their students' scores were submitted to analysis of covariance. (See Table 13)

The mean score achievement in all three areas of reading vocabulary, reading comprehension, and average reading scores, differ very little between the High Attitude Teacher groups and the Low Attitude Teacher groups. In no instance is the difference between the two attitude groups significant. In five of the student groups the difference of achievement is less than one month.

When the teacher responses on the MTAI and the three areas of the 30-item questionnaire were correlated, there appeared to be a significant relationship between the teacher responses to the MTAI and their responses to the attitude toward student section of the 30-item questionnaire. (See Table 4, p. 53) However, it is interesting to note that the High Attitude Teacher student groups based on these responses did not achieve in reading simi-

TABLE 13

ANALYSIS OF COVARIANCE FINDINGS INDICATING HIGH AND LOW ATTITUDE GROUP MEAN SCORES WHEN TEACHERS ARE GROUPED ACCORDING TO THEIR RESPONSES ON THE 30-ITEM QUESTIONNAIRE

Student Group	High Attitude* Teacher Group Mean Scores of Students	Low Attitude Teacher Group Mean Scores of Students	Difference in High and Low Attitude Mean Scores	F	Significance
		Reading Vocabulary			
Teacher Attitude - Students	6.68**	6.78	.10	1.676	N.S.
Teacher Attitude - Reading	6.58	6.66	.08	1.192	N.S.
Teacher Attitude - Curriculum	6.56	6.67	.11	2.00	N.S.
		Reading Comprehension			
Teacher Attitude - Students	6.34	6.29	.03	.467	N.S.
Teacher Attitude - Reading	6.22	6.31	.11	1.632	N.S.
Teacher Attitude - Curriculum	6.27	6.20	.07	.751	N.S.

*Groupings of teachers based on their responses to the 30-item questionnaire
**Grade level adjusted mean score

TABLE 13 (continued)

Student	High Attitude Teacher Group Mean Scores of Students	Low Attitude Teacher Group Mean Scores of Students	Difference in High and Low Attitude Mean Scores	F	Significance
		Average Reading Scores			
Teacher Attitude - Students	6.53	6.56	.03	.194	N.S.
Teacher Attitude - Reading	6.41	6.51	.10	2.306	N.S.
Teacher Attitude - Curriculum	6.43	6.47	.04	.392	N.S.

larly. A possible explanation is that all thirty-two teachers were used in the correlations and while the overall correlation may have been there, the teacher responses to the 30-item questionnaire placed a different group of teachers and their students in the ten High and Low Attitude Teacher groups than had been in the MTAI attitude groups. On page 55 it was noted that of the ten teachers who had scored highest on the MTAI, only seven of the teachers also scored highest on the 30-item questionnaire. Of the ten original low MTAI teacher group, only four of the teachers also scored lowest on the 30-item questionnaire. This means that of the twenty High and Low Attitude Teachers used for the major portion of this study, eleven of them were in both the MTAI and the 30-item questionnaire groups.

Summary of Findings

Evidence in this study supports the belief that the attitude of a teacher toward his students is a significant variable in cognitive learning, reading comprehension as presented in this study. Support for this belief is both consistent and strong from the findings based on the sixth grade students studied and the sixth grade teachers grouped into either High Attitude or Low Attitude.

There is also consistent evidence to show that teacher attitude toward students in the average reading

scores of students is a significant variable. Those students who had the High Attitude Teachers did significantly better in their grade level average reading achievement scores than did the students who had Low Attitude Teachers. The necessity for students having teachers who rank high in attitude when they are learning reading vocabulary was not shown to be a significant variable in this study.

This study did not establish a significant relation between the four variables of sex, I.Q., length of residence, and stage in the family cycle, and the effect teacher attitude has on the reading achievement of sixth grade students. Teacher attitude toward students appears to be important when students learn reading comprehension with little significant relationship shown between the teachers' attitude and the four other variables tested.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Chapter IV contains a review of the problem studied, the hypotheses tested, findings and conclusions of the research performed, suggestions for further research, as well as implications of this study for educators.

Restatement of the Problem Studied

An attempt was made in this research project to discover whether a significant relationship exists between the attitude of sixth grade teachers toward their students, and the achievement sixth grade students make in acquiring reading skills. Answers to the following questions were sought:

1. Will students who have teachers that rank higher in attitude toward students, achieve significantly better in acquiring reading vocabulary skills, than those students who have teachers who rank lower in attitude toward students?

2. Will students who have teachers who rank higher in attitude toward students, achieve significantly better in acquiring reading comprehension skills, than those students who have teachers who rank lower in attitude toward students?

3. Will students who have teachers who rank higher in attitude toward students achieve significantly better

in acquiring average reading scores based on a combination at vocabulary and comprehension scores, than those students who have teachers who rank lower in attitude toward students?

4. Is there a relationship between such variables as sex, I.Q., length of residence in a school community, stage in the family cycle, and the effect of teacher attitude on reading achievement?

To investigate the relationship which exists between teacher attitude and student achievement in reading, null hypotheses were formulated, to be accepted or rejected in view of the statistical evidence gathered.

Findings and Conclusions

Hypothesis 1

There is no difference between the mean reading vocabulary scores of the sixth grade students whose teachers rank higher in attitude (MTAI) and whose teachers rank lower (MTAI).

Findings.--The data did not establish a significant difference between the achievement in reading vocabulary of the students who had the High Attitude Teachers and the students who had the Low Attitude Teachers.

Conclusions.--The hypothesis is accepted, based on the findings of no significant difference in achievement. Students achieve in reading vocabulary similary, regard-

less of whether their teachers rate higher or lower on the MTAI.

Hypothesis 2

There is no difference between the mean reading comprehension scores of the sixth grade students whose teachers rank higher in attitude (MTAI) and whose teachers rank lower (MTAI).

Findings.--A significant relationship was shown to exist between teacher attitude toward students, and student achievement in reading comprehension. This relationship was established in every grouping of students, at either the .01 or .05 level of significance.

Conclusions.--The hypothesis is rejected. Throughout the statistical findings a consistent relationship was apparent between teacher attitude and student achievement in the skill of reading comprehension. There is indication that sixth grade students will consistently achieve better grade level scores in reading comprehension when their teachers record a higher score on the MTAI. The difference between the mean achievement scores of the High and Low Teacher groups was shown to be consistently significant.

Hypothesis 3

There is no difference between the combined mean vocabulary and reading comprehension scores of the sixth grade students whose teachers rank higher in attitude (MTAI) and whose teachers rank lower. (MTAI)

Findings.--The data established a relationship between teacher attitude toward students and student achievement in average reading scores. This relationship was established in every grouping of students, at either the .01 or the .05 level of significance.

Conclusions.--The hypothesis is rejected. A consistent relationship was established throughout the statistical findings between the attitude teachers have toward students and the way students achieve average reading skills. Although the achievement in reading vocabulary was not established as being contingent upon the attitude of classroom teachers toward students, the achievement in reading comprehension was so established, and when the two scores are combined there is a significant relationship shown between achievement of students and attitude of teachers. The indication is that the strength of the relationship established by the reading comprehension achievement was strong enough to carry the relationship between the average reading socres and teacher attitude toward students.

Hypothesis 4

There is no difference between the mean reading scores of the sixth grade students whose teachers rank higher in attitude toward students (30-item questionnaire) and whose teachers rank lower in attitude toward students (30-item questionnaire).

Findings.--The data did not establish a relationship between teacher attitude toward students as indicated by their responses on the 30-item questionnaire, and the average reading achievement scores of the students in their classrooms.

Conclusions.--The hypothesis is accepted. The data support the hypothesis. When the students were grouped into High or Low Attitude groups according to their teachers' responses on the student attitude section of the 30-item questionnaire the data do not show a significant difference in the achievement of the two groups of students in their average reading scores. Since there was a significant achievement of the High Attitude Teacher students over the Low Attitude Teacher students when the teachers were grouped according to their responses on the MTAI, it is possible that the dimension of attitude measured on the 30-item questionnaire did not lend itself to enough dichotomy for a significant achievement difference to occur. Also, the teachers were grouped according to their responses on only ten questions which were designed to measure attitude toward students.

Hypothesis 5

There is no difference between the mean reading scores of the sixth grade students whose teachers rank higher in attitude toward the teaching of reading (30-item questionnaire) and whose teachers rank lower in attitude

toward the teaching of reading (30-item questionnaire).

Findings.--The data did not establish a relationship between teacher attitude toward the teaching of reading as indicated by teacher response on the 30-item questionnaire, and the average reading achievement scores of the students in their classrooms.

Conclusions.--When the teachers were grouped according to their higher or lower responses on the reading section of the 30-item questionnaire and their students' achievement in average reading scores compared, no significant difference appeared between the achievement of the two groups of students. The grouping of students according to their teachers' responses concerning the teaching of reading did not produce the same significant difference shown when the teachers were grouped according to their MTAI responses. The statements on the 30-item questionnaire could possibly be measuring academic training and acuity rather than attitude.

Hypothesis 6

There is no difference between the mean reading scores of the sixth grade students whose teachers rank highest in attitude toward curriculum (30-item questionnaire) and whose teachers rank lowest in attitude toward curriculum (30-item questionnaire).

Findings.--The data did not establish a relationship between teacher attitude toward curriculum as indicat-

ed by teacher response to the 30-item questionnaire, and the average reading achievement scores of the students in their classrooms.

Conclusions.--The hypothesis is accepted. The data support the hypothesis. As in the attitude toward students and the attitude toward reading sections of the 30-item questionnaire, the attitude toward curriculum section also showed no significant difference in reading achievement between the students who had the higher attitude teachers as opposed to those students who had the lower attitude teachers. When only ten statements are used to make the division between higher and low attitude teachers, it is possible that the dichotomy was produced on a scale that was not fine enough to produce a true attitude grouping.

Summary of Research Project

When Getzels and Jackson explored 800 studies which were completed between 1950 and 1963 in which significant, reliable relationships concerning a teacher's personality and his effectiveness with students were studied, they concluded that effective teachers have similar traits. They found that effective teachers are friendly, cheerful, sympathetic, and morally virtuous, and since teaching implies a human interaction between people which is conceivably better when people are friendly and cheerful with each other, not very much has really been said about teaching

effectiveness. Getzels and Jackson maintained that what is needed is research into specific areas of teacher personality.[64]

The study conducted by the writer was an attempt to explore just one of the areas suggested by Getzels and Jackson to be one of the aspects of personality which makes a difference in teacher effectiveness with students. This area of study is the attitude of teachers toward students. The basic plan was to identify ten High Attitude Teachers and ten Low Attitude Teachers, then compare the reading achievement of the students of these two groups of teachers. It was anticipated that the students who had High Attitude Teachers would achieve better in all areas on reading skills tested than would the students who had Low Attitude Teachers.

When the reading achievement scores of the High and Low Attitude Teacher groups were examined, it was found that a significant relationship exists between teacher attitude and student achievement in the area of reading comprehension. This relationship was established consistently throughout, regardless of the way students were grouped according to the four variables of sex, I.Q., length of residence in their school community, and stage in the family cycle. A similar relationship was not established in any of the groupings between teacher attitude and student achievement in the area of reading vocabulary.

64Getzels and Jackson, op.cit. p. 506.

This study was undertaken with the belief that there could be a relationship between student achievement in reading and the attitude of classroom teachers toward students. The literature that was reviewed before the study proposal was written, gave strong indication that such a relationship could appear, even though a similar attitudinal study was not located for purposes of replication. The research design proceeded as planned. When the findings of the analysis of covariance were studied, evidence started appearing that students achieve significantly better in the area of reading comprehension with teachers who have higher attitudes, but apparently achieve comparatively well with students who have lower attitude teachers, in the area of reading vocabulary. The learning of reading vocabulary is a mechanical skill in learning to read, that of learning to identify letters and sounds, of analyzing words, of synthesizing sounds. The elements of comparison, configuration, and even guessing or making deductions are present.

The skill of comprehension implies the ability to read and understand not only what is printed but what is implied, the ability to interpret what is read and make judgments concerning content and the ability to read critically. In the area of reading comprehension a relationship between the students' achievement in reading comprehension and their teachers' attitude toward them

was established in this study. It appears to matter how the teacher relates to students when their higher thinking powers are in question. They can learn to word-call from a teaching machine, from programmed material, from other members of the class, from other coded methods, from their classroom teacher, as all they are doing is de-coding. But when students are asked to form those words into meaningful units and re-act to them by making judgments or inferences, they need the encouragement, the friendliness, the example, the positive force of their teacher.

The findings of this study could be stated in another way. When students are learning words the attitude of the classroom teacher is not the significant variable. When students are learning language the attitude of the classroom teacher is significant.

The ten High Attitude Teachers and the ten Low Attitude Teachers used in this study were similar to each other in sex, highest degree held, and years of teaching experience. They differed only in their position of ranking according to their raw score on the MTAI.

The teacher groups formed by their responses on the 30-item questionnaire appeared to be non-significant when the reading achievement of their students was considered. The correlation of responses between the 30-item questionnaire and the MTAI was significant in only one area, that of attitude toward students. The writer believes that the

non-significant showing of achievement difference between the student groups formed by teacher responses to the 30-item questionnaire is evidence that the 30-item questionnaire was ineffective as an attitude screening device, as compared to the MTAI, which is a standardized instrument. All of the null hypotheses pertaining to the 30-item questionnaire were accepted.

Four variables were tested for the purpose of showing a relation between the variable tested and the effect of teacher attitude on reading achievement. These variables were sex, I.Q., length of residence in the school community, and stage in the family cycle. In the interaction section of the analysis of covariance testing, none of the four variables tested appeared to have a relation between itself and the effect of teacher attitude on the reading achievement of the students.

Suggestions for Further Research

A replication of this study in various socio-economic settings would be most helpful to determine whether the achievement of the High Attitude Teacher students in the area of reading comprehension would be repeated. The students and teachers tested here were mainly white, middle class, suburban dwellers. The same research design could be carried out with Mexican-American children, black students, Puerto Rican students, or students in various

geographical areas of this country.

A study such as this could also be expanded to include the administering of the MTAI not only to the sixth grade teachers, but also to the elementary school principals. Observations could then be made concerning the attitude of the building principal toward students and the students' achievement in reading skills.

Another expansion of this study could be the investigation of more areas of language arts skills tested, namely, spelling and language development as well as reading vocabulary and reading comprehension. By including four dimensions of achievement, conclusions could be reached which would be meaningful to educators.

Implications of This Study for Education

The indication presented in this study is that the attitude of classroom teachers towards their students is significant as students develop their cognitive reading skills. While it is necessary to spend time with teacher trainees in the area of teaching the mechanics of reading, it is perhaps more necessary to convince aspiring teachers of their responsibility to students in their cognitive development. It is conceivable that students are capable of learning phonics, how a word fits into context, configuration of words, by a variety of extrinsically contrived means. However, since understanding, analyzing,

synthesizing, interpreting, and judging are higher forms of learning, and their greater development is apparently contingent upon the attitude of the person who is the teacher, greater emphasis could be placed upon the development of these skills in college courses. Creative and critical reading skills far transcend the development of mere vocabulary recognition and use. They deserve the most careful attention by college personnel, and should be included simultaneously when word-recognition and phonics skills are being taught.

What the writer is saying is that ideally word vocabulary and reading comprehension skills should be taught to children at the same time. The children can possibly gain skill in word recognition and vocabulary development with a teacher who is less positive in his attitude toward students, but his comprehension of reading may suffer. The use of machines and other mechanical devices can be used to reinforce the learning of reading vocabulary, but unless the teacher exhibits a warm, supportive attitude toward students, it is possible that the student cannot relax enough to understand what he is reading. Teacher trainees should be made aware of this responsibility in their teaching.

Another implication for education lies in the in-service programs for on-the-job teachers. Through the cooperation of sensitive training personnel in the field

of reading, it should be possible to schedule discussion sessions where the research of Arthur Combs, Ned Flanders, Benjamin Bloom, and the Cooperative Research Projects are examined for their value and direction. When the anxiety and frustration of teaching reading skills crowd in upon teachers, it may be possible for them to re-assess their efforts and strengths through in-service programs that encourage teachers to appraise their teaching methods, as well as their attitudes toward their students.

APPENDIX A

30-ITEM QUESTIONNAIRE

INTRODUCTION

Below is a list of statements concerning children, curriculum and the teaching of reading. Respond to these statements on the basis of your own true beliefs. There are no right or wrong answers.

Read each statement and then write, in the space provided at its left, only one of the numbers below.

The key is:	0	Strongly disagree
	1	Disagree
	2	Undecided
	3	Agree
	4	Strongly agree

R*
..... 1. The teaching of reading involves teaching a process rather than a subject.

Ch
..... 2. The child is innately good and should be allowed to grow naturally.

Cu
..... 3. The child must be disciplined if he is to become a civilized human being.

Ch
..... 4. It is desirable that students and teachers plan most learning activities together.

Ch
..... 5. The child is neither good nor bad, but may become either, depending upon his experiences.

---

*The three areas of Reading (R), Children (Ch), Curriculum (Cu) have been indicated by the appropriate symbols in front of each statement.

Cu
..... 6. The curriculum should be built around reading, arithmetic, spelling, history, language, science, and like subjects.

Ch
..... 7. How a child feels about what he learns is as important as what he learns.

Cu
..... 8. A child should gain knowledge and thus he will be educated.

R
..... 9. It is just as important for younger students to learn critical reading skills as it is for older students.

R
..... 10. As studen s are learning word identification skills they should be learning comprehension skills at the same time.

Ch
..... 11. Teacher-pupil planning is most important for the development of good citizenship in a democracy.

Ch
..... 12. Learning activities should be determined by, and centered in, pupil interests.

Cu
..... 13. Competition and rivalry are usually the best incentives to pupil achievement.

R
..... 14. Phonics skills are best taught as an integral part of a basal reading program.

Cu
..... 15. Good books are the best source of learning.

R
..... 16. Teachers should never expect students to read stories in which they miss more than one word in every ten.

Ch
..... 17. The evaluation of the child's learning should be based on how well he is able to solve his daily problems.

R
..... 18. The students' academic books (social studies, science, math) should have readability levels one grade below the regular graded reading texts.

Ch
..... 19. A basic aim of education is to help students understand and express their feelings about their experiences.

Cu
..... 20. The study of geometry develops a logical mind.

Ch
..... 21. The child realizes his best self in situations where he can creatively express himself.

R
..... 22. When students are reading material at their own instructional level (even if this is below their grade level) they do not need remedial reading instruction.

R
..... 23. Reading skills should always be taught sequentially, even when the students' experiences are the basis of the reading instruction.

Cu
..... 24. Standard achievement tests are one of the most desirable means of determining whether a student should advance to the next grade.

R
..... 25. A teacher's attitude toward students is more important than method or material in the teaching of reading.

Ch
..... 26. Education may be thought of as growth, especially in the ability to reconstruct past experiences to solve problems.

Cu
..... 27. Understanding is best promoted by a logical development of the course of study.

R
..... 28. The greatest reading enjoyment can be achieved only when students have learned to read creatively.

Cu
..... 29. Students profit most by mastering one task well before proceeding to a different task.

Cu
..... 30. The development of a student's mind is the most worth-while goal of dedicated educators.

A. Years taught. . . . . .

B. Highest degree held . . . . . .

APPENDIX B

CORRELATION OF STUDENT PRE AND POST TEST DATA

TABLE 14

CORRELATION OF PRE AND POST TEST DATA

Sex	Reading Area	Pre or Post Test	Mean	S.D.	Correlation
		High Attitude Teacher Group			
Boys	Reading Vocab	Pre test	6.436	1.295	.81
		Post test	6.782	1.411	
Girls		Pre test	6.229	1.316	.77
		Post test	6.729	1.226	
Boys	Reading Compre	Pre test	6.212	1.392	.76
		Post test	6.320	1.397	
Girls		Pre test	6.238	1.221	.77
		Post test	6.575	1.145	
Boys	Average Reading	Pre test	6.345	1.248	.86
		Post test	6.577	1.302	
Girls		Pre test	6.269	1.245	.81
		Post test	6.655	1.169	
Boys and Girls	Reading Vocab	Pre test	6.333	1.306	.79
		Post test	6.769	1.323	
	Reading Compre	Pre test	6.225	1.276	.82
		Post test	6.448	1.281	
	Average Reading	Pre test	6.307	1.245	.82
		Post test	6.616	1.238	

TABLE 14 (continued)

Sex	Reading Area	Pre or Post Test	Mean	S.D.	Correlation
		Low Attitude Teacher Group			
Boys	Reading Vocab	Pre test	6.404	1.231	.75
		Post test	6.675	1.254	
Girls		Pre test	6.257	1.398	.82
		Post test	6.561	1.502	
Boys	Reading Compre	Pre test	6.154	1.332	.72
		Post test	6.118	1.441	
Girls		Pre test	6.246	1.367	.70
		Post test	6.190	1.471.	
Boys	Average Reading	Pre test	6.288	1.215	.80
		Post test	5.421	1.268	
Girls		Pre test	6.258	1.295	.82
		Post test	6.398	1.373	
Boys and Girls	Reading Vocab	Pre test	6.331	1.312	.79
		Post test	6.618	1.376	
	Reading Compre	Pre test	6.200	1.232	.71
		Post test	6.154	1.453	
	Reading Average	Pre test	6.273	1.251	.81
		Post test	5.909	1.316	

APPENDIX C

Listing of the questions of the 30-Item Questionnaire showing the mean responses of the teachers.

TABLE 15

LISTING OF THE QUESTIONS OF THE 30-ITEM QUESTIONNAIRE SHOWING THE MEAN RESPONSES OF THE TEACHERS

MTAI High Att. Tchrs.	MTAI Low Att. Tchrs.		Question
Mean Responses			
			Attitude toward Students
2.8	2.5	2.	The child is innately good and should be allowed to grow naturally.
3.8	2.5	4.	It is desirable that students and teachers plan most learning activities together.
2.9	2.3	5.	The child is neither good nor bad but may become either, depending upon his experiences.
4.0	3.6	7.	How a child feels about what he learns is as important as what he learns.
3.5	2.5	11.	Teacher-pupil planning is most important for the development of good citizenship in a democracy.
3.6	3.1	12.	Learning activities should be determined by, and centered in, pupil interests.
2.4	2.7	17.	The evaluation of the child's learning should be based on how well he is able to solve his daily problems.

TABLE 15 (continued)

MTAI High Att. Tchrs.	MTAI Low Att. Tchrs.		Question
Mean Responses			
3.4	3.0	21.	The child realizes his best self in situations where he can creatively express himself.
3.4	3.2	26.	Education may be thought of as growth, especially in the ability to reconstruct past experiences to solve problems.
			Attitude Toward Reading
3.5	2.9	1.	The teaching of reading involves teaching a process rather than a subject.
3.3	3.5	9	It is just as important for younger students to learn critical reading skills as it is for older students.
3.0	3.1	10.	As students are learning word identification skills they should be learning comprehension skills at the same time.
3.1	3.3	14.	Phonics skills are best taught as an integral part of a basal reading program.
1.0	2.0	16.	Teachers should never expect students to read stories in which they miss more than one word in every ten.

TABLE 15 (continued)

MTAI High Att. Tchrs.	MTAI Low Att. Tchrs.		Question
Mean Responses			
1.7	1.8	18.	The students' academic books (social studies, science, math) should have readability levels one grade below the regular graded reading texts.
1.8	1.3	22	When students are reading material at their own instructional level (even if this is below their grade level) they do not need remedial reading instruction.
2.0	2.0	23.	Reading skills should always be taught sequentially, even when the students' experiences are the basis of the reading instruction.
3.2	2.6	25.	A teacher's attitude toward students is more important than method or material in the teaching of reading.
2.6	2.3	28.	The greatest reading enjoyment can be achieved only when students have learned to read creatively.

TABLE 15 (continued)

MTAI High Att. Tchrs.	MTAI Low Att. Tchrs.		Question
Mean Responses			
			Attitude Toward Curriculum
1.2	.7	3.	The child must be disciplined if he is to become a civilized human being.
1.8	.7	6.	The curriculum should be built around reading, arithmetic, spelling, history, language, science, and like subjects.
2.8	2.0	8.	A child should gain knowledge and thus he will be educated.
3.2	2.1	13.	Competition and rivalry are usually the best incentives to pupil achievement.
1.9	2.2	15.	Good books are the best source of learning.
2.0	2.4	20.	The study of geometry develops a logical mind.
3.0	3.4	24.	Standard achievement tests are one of the most desirable means of determing whether a student should advance to the next grade.
1.2	1.7	27.	Understanding is best promoted by a logical development of the course of study.

TABLE 15 (continued)

MTAI High Att. Tchrs.	MTAI Low Att. Tchrs.		Question
Mean Responses			
2.5	1.7	29.	Students profit most by mastering one task well before proceeding to a different.
.5	.9	30.	The development of a student's mind is the most worth-while goal of dedicated educators.

APPENDIX D

STUDENT QUESTIONNAIRE

STUDENT QUESTIONNAIRE

NAME. . . . . .
(first) (last)

SCHOOL. . . . . .

BOY - GIRL (Circle One) . . . . . .

NUMBER OF YEARS YOU HAVE ATTENDED THIS SCHOOL . . . . . .

SCHOOL ATTENDED BEFORE ATTENDING THIS SCHOOL. . . . . .

List all the members of your family, including yourself. Begin with your father and mother, then the oldest child, the second oldest, and so on. Tell how many years of schooling each one has completed.

	Name	Number of years of school completed
Father	_____	_____
Mother	_____	_____
Oldest child	_____	_____
Second child	_____	_____
Third child	_____	_____
Fourth child	_____	_____
Fifth child	_____	_____
	_____	_____
	_____	_____

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