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An Investigation of the Effects of Teachers' Expectations on the Achievement in Reading of First-Grade Boys.

Billy Jean Broome

Louisiana State University and Agricultural & Mechanical College

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AN INVESTIGATION OF THE EFFECT OF TEACHERS' EXPECTATIONS ON THE ACHIEVEMENT IN READING OF FIRST-GRAND BOYS

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Education in

The Department of Education

by

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This study had as its purpose: (1) to determine the effect of teachers' reported expectations concerning the probable success of first-grade boys in learning to read on the measured achievement in reading which the pupils in their classes attained; and (2) to determine specifically the effect of these expectations on the reading achievement of the first-grade boys.

One hundred and sixteen teachers in a Louisiana city returned questionnaires which were designed to obtain from them a report of their expectations concerning the probable success in reading of first-grade boys. Fourteen teachers (Group A) who believed that first-grade boys are more successful or as successful as girls in learning to read were then matched with fourteen teachers (Group B) who expected that first-grade boys are not as successful as girls in learning to read.

The sample used in this study consisted of the 118 boys and the 133 girls whose teachers constituted Group A and the 132 boys and 149 girls whose teachers constituted Group B. After several of the variables for the pupil groups were accounted for, the mean reading achievement scores for over-all reading achievement, word reading,
paragraph meaning, vocabulary, and work-study-skills were obtained from the Stanford Achievement Test.

The null hypothesis with three parts, each part dealing with whether there were statistically significant differences between and/or among the groups of pupils in their reading achievement scores, was tested. The statistical model used to test for differences in achievement was an analysis of covariance, using the least squares technique, with pupils' intelligence quotients serving as the covariable. Tests for significance were made at the .05 level of confidence. For the null hypothesis F-ratios were computed for sex, group, and sex by group interaction.

The following conclusions were reached:

1. Girls had significantly higher scores than boys in over-all reading achievement, word reading, paragraph meaning, and word-study-skills. Vocabulary scores were not found to be statistically significant for the 250 boys and the 282 girls.

2. When grouped according to teachers' expectations, significantly higher scores were made by the 281 Group B pupils in over-all reading achievement, word reading, and paragraph meaning. Vocabulary and word-study-skills scores were not found to be statistically significant.

3. When grouped according to sex and teachers' expectations, no statistically significant differences were found in the scores for the four pupil groups on over-all
reading achievement, word reading, paragraph meaning, vocabulary, or word-study-skills. Therefore, the findings relative to the major interest of this investigation indicates that being male or female and being with teachers of high or low expectations for boys versus girls relative to success in learning to read at the first-grade level does not affect significantly the scores on the Stanford Reading Test.
CHAPTER I

INTRODUCTION

The inability to read is recognized as the most important single cause of school failure.¹ Research indicates that boys are initially less successful in learning to read than girls.² Although the real cause for the failure of boys to achieve as well as girls is not clearly established, one of the explanations for this difference in achievement has recently been attributed to the expectations of the teachers which affects the child's self-concept. According to Rosenthal and Jacobson, teachers' expectations of their pupils' performances serve as self-fulfilling prophecies and may be operating to a considerable extent in schools and classrooms throughout the country.³

According to Palardy, teachers communicate their beliefs to their pupils either consciously or unconsciously.

The pupils in turn begin to perceive and value themselves in the same way they think their teachers value them. Thus, the role of the teacher becomes of significance in determining when a pupil's self-perceptions regarding his ability to succeed in a curriculum area become positively associated with his actual performance in that area. The hypothesis that the achievement of pupils is affected significantly by what their teachers expect concerning the pupils' ability to succeed is not a new idea. However, relatively little research has been done with the express intention of testing it.4

THE PROBLEM

Statement of the problem. This study had as its purpose: (1) to determine the effect of teachers' reported expectations concerning the probable success of first-grade boys in learning to read on the measured achievement in reading which the pupils in their classes attained; and (2) to determine specifically the effect of these expectations on the reading achievement of the first-grade boys.

The null hypothesis was used to test (1) over-all reading achievement, (2) word reading, (3) paragraph meaning,

(4) vocabulary, and (5) word-study-skills for significance at the .05 level of confidence. This hypothesis had three parts which are stated below in null form:

1. There is no statistically significant difference between reading achievement scores of pupils classified according to sex.

2. There is no statistically significant difference between reading achievement scores of pupils classified according to their teachers' expectations concerning the probable success of first-grade boys in learning to read.

3. There is no statistically significant interaction between reading achievement scores and pupils, classified both according to their sex and their teachers' expectations.

Importance of the study. Investigators have increasingly turned their attention away from the study of intelligence as it relates to the reading process to internal states such as values, emotions, interests, attitudes and mental set, and the influence or effect these states have on performance of the reading task. Many educators believe that such factors as lack of self confidence and lack of ego (self) strength do relate to or influence the reading process.⁵

In short, the ego is the child, a physical entity, interacting with his environment and his own ideas and feelings. Anything which interferes with the development of the ego and any of its functions will undoubtedly influence the child's ability to learn to read. Thus, the role of the teacher becomes of significance in determining the degree to which the child will be crippled by the interference to the development of the ego (self) functions.  

The self is a set of beliefs about who and what a person is, when beliefs are implanted through the approval and disapproval of others, and this leads a person to behave so as to avoid the insecurity of disapproval. The significant others, parents and teachers, indicate their evaluation of a person in various direct or subtle ways, and this too enters into a person's feeling of worth and the development of the self. 

A positive relationship has been found (1) between students' self-perceptions of their ability to succeed in an academic subject area and the actual success they do attain, and (2) between adequacy of self-concept and high academic achievement and between inadequacy of self-concept...
and low academic achievement. The self-fulfilling prophecy seems to have implications of some considerable consequences for educators in relation to the effect of teachers' beliefs on pupils' achievement.

It is commonly observed that more boys than girls are unsuccessful in beginning reading. Although the real cause for the failure of boys to achieve as much as girls is unknown, various theories have been proposed. Factors of growth, maturation and development are considered most critical by some. One of these theories, based on knowledge of child growth, maturation, and development is explained by Nila B. Smith.

The fact that girls develop more rapidly than boys is too well-established to belabor further. By the time the girl is in the second grade, she is actually a year older physically than the boy because she is a year nearer her final development. This may mean that the second grade teacher has seven-year-old girls and six-year-old boys in the same reading class insofar as physical development is concerned. If mental development accompanies physical development as it is normally supposed to do, then the teacher of young children might expect that more boys than girls in her

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class would have some difficulty in learning to read. Most research on this subject indicates that this is the case.11

Gates found that, in general, girls excelled boys in reading. The persistence of the degree of superiority of girls should be interpreted as reflecting an environmental rather than a hereditary or sexual influence.12

Another study that reveals an explanation for boys' lower interest in reading was developed by Slobodian and Campbell.13 The investigation included ten randomly selected classes of first-grade boys and girls. The pupils were asked a variety of questions designed to determine whether they perceived differential treatment from their teachers in reading groups. The results showed that the boys were viewed by the pupils as having received more negative teacher comments than the girls. The investigation also indicated that boys were nominated as having had less opportunity to read than girls.


A final explanation regarding boys accomplishing less reading skills is the result "... of interest, attitudes, habits, and general behavior tendencies of the boys to which the teachers (all women) fail to adjust themselves and their school procedures as well as they do to the personality traits of girls." 14

In general, implications of the preceding facts would seem to indicate that teachers' expectations regarding boys' successful reading skills depends on the degree to which teachers believe them capable of success, even though boys traditionally are supposed to be less successful than girls in learning to read.

DEFINITIONS OF TERMS

Expectations. An expectation is a prospect of the future that is expected or looked for.

Self-concept. The self-concept is an individual's evaluation of the sum total of his fundamental characteristics.

Reading achievement. The term, "reading achievement," indicates the pupils' level of attainment on tests

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of reading as determined by results of standardized achievement tests.

**Reading readiness test.** The reading readiness test is intended for use in the kindergarten and first grade to help teachers identify those pupils who are most likely to succeed in beginning reading.\(^\text{15}\)

**Intelligence test.** An intelligence (IQ) test as used in this study is a standardized instrument for measuring pupils' mental processes of classification, following of directions, quantitative reasoning, and comprehension of verbal concepts. The intelligence test used in this study was the *Otis-Lennon Mental Ability Test, Elementary I Level*, designed for use with classroom groups.\(^\text{16}\)

**Reading achievement test.** A reading achievement test as used in this study, is a standardized instrument for group measure of a pupil's understanding of definitions, synonyms, ready associations, and of his ability to comprehend sentence structure. The reading achievement test used


PROCEDURES USED IN SETTING UP THE STUDY

Procedure. The procedure for this study was as follows:

A form letter and a brief questionnaire (Appendix A) were sent in October, 1969, to the 222 first-grade teachers in the East Baton Rouge Parish Schools. Other than information needed for controlling teacher variables, this questionnaire elicited from the teachers their expectations regarding the ability of first-grade boys to succeed in reading.

On the basis of the questionnaires returned, the teachers were divided into groups consistent with their expectations as to whether boys were more successful, as successful, or less successful than girls in learning to read. Group A consisted of those teachers who believed that first-grade boys are more successful or as successful as girls in learning to read. Group B consisted of those teachers who believed that first-grade boys are not as successful as girls in learning to read.

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The teachers from Group A were matched with teachers from Group B on the basis of the number of years of experience as a first grade teacher, the socioeconomic area of the school in which the teachers were employed, and the degree held.

Data from the reading readiness test, the Pre-Reading Test of Scholastic Ability to Determine Reading Readiness, routinely administered by all first-grade teachers were obtained for the selected teacher-pupil groups. During the eighth month of the current school year, the Stanford Reading Test, Primary I, and the Otis-Lennon Mental Ability Test, Elementary I Level were administered to the pupils in both Group A and Group B. The pupils were then matched according to chronological ages, socioeconomic level of the community in which the school is located, measured readiness for reading, and measured intelligence.

After controls had been established for the groups of pupils, the data from the reading achievement test were used to test the null hypothesis that no statistically significant difference between reading achievement scores of pupils classified according to sex and as a result of their teachers' expectations concerning the probable success of first-grade boys in learning to read.

An analysis of covariance, using the least squares technique, with pupils' intelligence quotients serving as the covariable was used to determine the significance of the data.
SCOPE AND LIMITATIONS

This study was designed for the purpose of investigating the effects of teachers' expectations concerning the achievement in reading of first-grade boys. To gain this information several limitations were imposed by the nature of the sample chosen and the procedure followed.

The sample was selected from the first-grade teachers and their pupils in the public schools of East Baton Rouge Parish. The final sample consisted of the selected first-grade teachers from designated schools that responded to the questionnaire. Several teacher variables were considered: the number of years of first-grade teaching experience, the socioeconomic level of the school in which each was teaching, and the kind of degree each teacher held. Other uncontrolled teacher variables were age, race, college attended, year of graduation, type of certification, and number of years of teaching experience other than the first grade.

A second limitation was the fact that the questionnaire itself imposed limitations. The care with which each teacher responded to it, her mental attitude at the time she responded, and her understanding of the questions are factors that could vary. The psychological or sociological cause for the teacher's reported expectations can not be determined. Also, the reported expectations might not be true expectations.
Finally, the pupils themselves imposed some limitations. The pupil variables accounted for were age, intelligence, reading readiness and general socioeconomic background. Some others not included were kindergarten attendance, attitudes about school, motivational factors, racial and religious backgrounds, and peer relationships.

Despite the many limitations, especially in the human elements, it is believed that the major factors which might have some differentiating effect on the pupils' reading achievement were taken into account.

ORGANIZATION OF THE REMAINDER OF THE STUDY

This study is organized into five chapters. Chapter I includes a general introduction to the study, a statement of the problem, a definition of terms, the procedure to be followed, the importance of the study, and the scope and major limitations of the study.

Chapter II presents a review of related literature including pertinent research studies. Chapter III presents a complete description of the methodology of the study. In Chapter IV presentation and interpretation of the data and the basic findings of the study are reported. A summary of the study and a listing of concluding statements are included in Chapter V.
CHAPTER II

REVIEW OF THE LITERATURE

The central purpose of this study was to determine whether the reported expectations of first-grade teachers concerning the probable reading success of first-grade boys had any significant effect on the measured achievement in reading within their classes. The hypothesis that the achievement of pupils is affected significantly by what their teachers expect is not a new idea. A summary of the work done on studies very closely related to the one at hand will be reviewed here.

SELF-FULFILLING PROPHECY AND ACHIEVEMENT

The Dean of American sociologists, W. I. Thomas, set forth a theorem basic to the social sciences more than three decades ago: "If men define situations as real, they are real in their consequences."18 Were the Thomas theorem and its implications more widely known, more men would understand more of the workings of our society. The theorem

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is a reminder that men respond not only to the objective features of a situation, but to the meaning this situation has for them. In another study by Merton, he concluded that the self-fulfilling prophecy translates social fantasy into reality. The term, then, "self-fulfilling prophecy," may be applicable to many social processes.

Recent research in education, psychology, and sociology reveals that the self-fulfilling prophecy may be operating to a considerable extent in schools and classrooms throughout the country. Rosenthal and Jacobson found, when eighteen teachers had been told that some of their elementary pupils would show outstanding intellectual growth in the academic year ahead that those pupils did make significantly greater gains in IQ than the other pupils in the same classrooms who had not been designated as "intellectual spurters." There was, in reality, no difference between the two groups of pupils relative to their potential for "intellectual spurting." The only difference was in the minds of their teachers who had high expectations for them.

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The self-fulfilling prophecy as it relates to the academic achievement of certain pupils within a classroom situation might be thought of in the following terms. If a teacher expects that some pupils have a good chance of succeeding academically, he will directly or indirectly communicate this belief to them through his actions with them. Soon, the pupils will begin to perceive themselves in the same way the teacher perceives them and to value themselves in the same way the teacher values them. Finally, if the pupils' self-concepts are positive regarding their ability to succeed academically, they will succeed.

Claiborn's study, however, which was designed to partially replicate the Rosenthal and Jacobson findings made an attempt to explore the relationship between the teacher's expectations and her teaching behavior. When pre- and post-test scores were compared in twelve first-grade classrooms no relative IQ gains were found for the pupils who were the object of the expectancy bias. In view of the present findings, expectancy effects which have been reported in the literature appeared to be less pervasive and reliable than had been assumed. Further, though teaching practices did

change as a result of the experimental treatments, there was no clear evidence to suggest that the differences were consistent across teachers or pupils. For the sample of classrooms studied, variables other than teacher expectancy in intellectual potential seem more important in determining pupil performance and the nature of teacher-pupil interactions.  

Another study involving both boys and girls, but designed to determine the effect of teachers' reported beliefs concerning the probable success of first-grade boys in learning to read, was conducted by Palardy.

Forty-two first-grade teachers in an Ohio city returned a questionnaire, one item of which was designed to elicit from them a report of their beliefs concerning the probable success in reading of first-grade boys. Five teachers (Group A) who believed that first-grade boys are as successful as girls in learning to read were then matched with five teachers (Group B) who believed that first-grade boys are far less successful than girls in learning to read.

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23 Ibid., p. 4365.


25 Ibid., p. 3338.
Two major conclusions were drawn from the findings. First, when first-grade teachers reported that they believed that boys are far less successful than girls in learning to read, their male students did achieve less well on a standardized reading test than did a comparable group of boys whose teachers reported that they believed that boys are as successful as girls in learning to read; and secondly, when teachers reported that they believed that boys are far less successful than girls in learning to read, the boys in their classes were far less successful than the girls.\(^{26}\)

Of the three previously mentioned studies the Rosenthal and Jacobson study, Pygmalion in the Classroom, seems to be the most widely reviewed concerning the self-fulfilling prophecy.

Following is a representative sample of the kinds of reviews found in the literature attesting to the importance of this study; the controversy it aroused which points up the need for further study.

Buckley's review stated that the book does not prove that teachers' expectations of their pupils' performances serve as self-fulfilling prophecies, but only "suggests" that teachers' expectations may have an effect on the intellectual performance of pupils.\(^{27}\)

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\(^{26}\)Ibid., p. 3339.

\(^{27}\)James J. Buckley, "Who is Pygmalion?" Phi Delta Kappan, L (October, 1968), p. 124.
Kohd found the study ingenious and the results gratifying and highly significant.\textsuperscript{28}

Thorndike's review concluded that the study may become a classic, but does nothing to raise the standards of educational research.\textsuperscript{29}

Rosenthal later answered this criticism of \textit{Pygmalion in the Classroom}, especially the questions raised by Thorndike concerning the research instrument used and the results obtained. By using considerable objective statistical data available on the instrument he submits all questionable hypotheses to further empirical tests, reasserting the validity of his original study and findings.\textsuperscript{30}

Bloom describes a self-fulfilling prophecy in this way:

Each teacher begins a new term (or course) with the expectation that about a third of his students will adequately learn what he has to teach. He expects about a third of his students to fail or just 'get by' . . . . This set of expectations supported by school policies and practices in grading becomes transmitted to the students through the grading procedures and through the methods and materials of instruction. This system


creates a self-fulfilling prophecy such as, that the final sorting of students through the grading process becomes approximately equivalent to the original expectation.\textsuperscript{31}

Finally, Lagemann, describes the self-fulfilling prophecy in this way: "The way we imagine ourselves to appear to another person is an essential element in our conception of ourselves. The knowledge that others believe in us and count on us acts as a self-fulfilling prophecy and helps us to become as good as they think we are."\textsuperscript{32}

TEACHERS' INFLUENCE ON PUPILS' SELF-CONCEPT

Research indicates that teachers may affect the self-concepts of their pupils, and that these self-concepts are related to pupils' achievement. The theory and data presented in this section will review the recent studies of teacher influence on the self-concept of their pupils.

Among the earliest experiences which influence the development of the child's view of himself are those with significant other people.\textsuperscript{33} Kinch stated that one of the

\begin{quote}


\end{quote}
basic postulates of any formalized theory of the self-concept is that it is based on a child's perception of the way others are responding to him. Brookover and Gottlieb have pointed out that parents are more universally mentioned than any other single category of persons as being significant. However, teachers too are considered to be very important in helping to form and influence the self-concept of a child.

The following is a sample of kinds of statements found in the literature revealing teacher influence on pupil self-concept:

Davidson and Lang asserted, "Among the significant people believed to affect the child's feelings about himself are first his parents, and, later his teacher."

Jersild said, "But if the significant people in his life—at first his parents and later his teachers, peers, and other persons who wield an influence—belittle him, blame him and reject him, the growing child's attitudes

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toward himself are likely to become unfavorable."^{37}

Drews stated that, "The fundamental aim of teachers should be to help the child realize himself, help him develop his potentialities so he can move toward a more adequate self."^{38}

Bledsoe concludes, "Basic to the acquisition of adequate and accurate self-concepts is the teacher who accepts each child as a unique person worthy as an end in himself, and who helps him in his growth toward self-realization."^{39}

Staines assumed, "Amongst the people likely to be most influential in determining the self-picture are teachers."^{40}

Pietrofesa's assumption was that, "It is necessary for the teacher (and parents and other significant adults) to develop a positive self-concept in a youngster."^{41}

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^{37}Jersild, op. cit., p. 203.


Educators have long recognized that affective emotional needs of children can affect school learning. When such needs as anxiety, dependency, achievement, and aggression are strong, they affect self-concept, and so exert an influence upon what and how the pupil learns.

Until recent years there was a lack of empirical data on the subject of teacher influence on the development of pupils' self-concept. Wylie, who reported a review of the literature on the self-concept, implied that a need for empirical data was needed on the subject.\(^42\)

In a study by Staines\(^43\) an effort was made to examine how the self-concept of pupils is affected by teachers. This was a study with two junior high school scholarship classes. The classes were matched according to age, intelligence, and socioeconomic level. The experimental class was taught by a teacher who was completely aware of the importance of the self-concept, and who intentionally made an attempt to enrich the pupil's self-concept. The control class was taught by a teacher who was supposed to be unaware of the self-concept theory.


\(^{43}\)Staines, *op. cit.*, p. 404.
The teaching period for the experiment was twelve weeks. The experimental class teacher studied the self-rating of his class and tried to teach so that certain self-ratings were changed. A small number of changes occurred in self-traits, but statistically significant changes were found in two dimensions of the self. . . . Both changes were interpreted as indicating greater psychological security.44

The control class, however, showed significant decreases in certainty about the self and in differentiation. The uncertainty spread throughout the self and was significantly greater than that of the experimental group. Both changes were interpreted as leading to a marked psychological insecurity. These changes, usually indicative of poor adjustment, were the unsought and unnoticed concomitant outcomes of normal methods aimed at securing the usual academic results.45

Chadwick designed a follow-up of the Staines study.46 This study reveals very different findings. This

44Ibid., p. 405.
45Ibid.
research was developed to investigate whether teachers might be able to incorporate into their role, behavior believed appropriate to the healthy development of their pupils' self-concepts. The purpose of the study was to find out whether such behavior, in conjunction with knowledge of their pupils' existing self-concepts, might result in changes attributable to the pupils' behavior which might occur without detriment to academic progress.\(^\text{47}\)

No significant differences were found between the experimental classes and the one control class in regard to changes in the self-picture, even though the experimental teachers had incorporated into their behavior the appropriate situations for the positive development of the junior high school pupils' self-concept.\(^\text{48}\)

In an action research study conducted by Foshay, the use of teacher approval and disapproval seemed to have an effect on the self-concepts of elementary children. Foshay worked with eleven teachers and ninety children for a period of two years. Part of the conclusions indicated that the teacher's approval or disapproval is a very important contributing factor to the personal feeling of worth to the


Sontag and Kagan contend, on the basis of their findings from the longitudinal studies of the Fels Research Institute, that the years six to ten are a crucial period in the development of the child's personality and intellect. The elementary school teacher, these researchers contend has a "tremendous impact" . . . as a model upon the impressionable personality of the child . . . people who are selected for roles in elementary education should be people with strength and warmth to foster such identification. Sontag and Kagan further contend that in grades one through four, a teacher's capacity to foster positive identification is especially crucial for the optimum development of the child's personality and intellect.

Wallis says for a student to think well of himself generally requires that he be thought well of by those with whom he associates, especially those "significant others" whose opinions and attitudes toward him mean more than anyone else.  

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51Ibid., p. 533.

than others' opinions and attitudes. One's self-evaluations are thus, among other things, due to the interaction between self-consciousness, the attitudes of others as they are perceived and interpreted, and the adjustment one makes in his self-concept.

Videbeck, investigating the relationship between behavior patterns of teachers and the self-concept of their students, using thirty college students as experimental subjects found that a person's actual self-concept will move closer to his ideal-self rating if he receives approval from his teacher, and that one's actual self-concept will move farther away from his ideal-self rating if he receives disapproval from his teacher.\(^5^3\)

As most of the theory and data presented in this section indicate, teachers are in a position to influence positively the self-concepts of their pupils; however, an investigation sponsored by the United States Office of Education showed somewhat different findings. This was a three year study conducted by Morse.\(^5^4\) General self-concepts and the school self-concepts of over 600 pupils in grades three


through eleven were studied. The study revealed the following findings:

Eighty-four per cent of the third graders are proud of their school work, while only fifty-three per cent of the eleventh graders are. In the low grades, ninety-three per cent feel they are doing the best work they can; only thirty-seven per cent of the oldest pupils feel this way. Regardless of their achievement quotients and the fact that failures tend to drop out, the pupils who remain in school come to feel that they are doing inadequate work. Again, over half of the young pupils say that they are doing as well in school as they would like, but only twenty-two per cent of the eleventh graders feel this way. About forty per cent of pupils at all age levels often feel upset in school; with regard to achievement twenty per cent say their teacher makes them feel "not good enough" and these items stay virtually the same with age. Over forty per cent report they often become discouraged in school, and this increases with age from twenty-two per cent to forty-three per cent.

While neither the self-picture nor the school self-esteem is pleasant, the school self appears to be the more negative. Whatever else we have done, we have communicated a sense of personal failure to many of our pupils. In general, the longer we have them, the less favorable things seem to be.55

Finally, if a child senses that the teacher and the school value him, his self-confidence is not threatened and he can react favorably to the influence of the teacher. But if a child is held in low esteem, his attitude toward school and his motivation to learn are likely to suffer. If a child has confidence in his ability to learn, his power to learn is released; he can face occasional failure and try

55Ibid., pp. 26-27.
again. If he believes that he cannot learn, the belief may become the fact. To maintain self-confidence, the child must experience more success than failure. He must achieve recognition and approval from his teachers. Good education is challenging, not frightening. It produces satisfaction in achievement, an accompanying sense of competence and independence, and approval of others. It thus stimulates further learning, for the pupil's expectations of himself continue to grow.  

SELF-CONCEPT AND ACHIEVEMENT

Self-esteem is a better predictor of a child's future success in school than intelligence. Every teacher has encountered a child who, though he has scored well on intelligence and reading-readiness tests, still cannot read by the time he gets to the second grade. Frazier and Combs wrote that most failures in reading and spelling are not due to the incapacity of the student; rather, they are due to his attitude toward the tasks of reading and spelling. He seems himself inadequate and so behaves


inadequately. 58

Combs used this same rational in the following context:

Let us take, as an example, the child who has developed a concept of himself as "unable to read." Such a child is likely to avoid reading, and thus the very experience which might change his concept of self is bypassed. Worse still, the child who believes himself unable to read, confronted with the necessity for reading, is more likely than not to do badly. The external evaluation of his teachers and fellow pupils, as well as his own observations of his performance, all provide proof to the child of how right he was in the first place! The possession of a particular concept of self tends to produce behavior that corroborates the self-concept with which the behavior originated. 59

A child's performance in the classroom seems to be determined, largely, by what teacher expects of Johnny. If the teacher's expectancy does have an important effect on pupils, the mechanisms at work must be elevated from mysterious abstractions to a clear statement. The statement would reveal the overt teacher behaviors that communicate teacher expectancies to pupils, leading them to perform in a manner which confirms the teacher's original expectancies. Good concluded that, "The classroom may be looked upon as a roulette table where the teacher can place bets on pupils'
performance and then has the power to manipulate forces that will allow her forecast to be realized."\(^{60}\)

Rosenthal concurred by saying:

To a great extent, our expectations for another person's behavior are accurate because we know his past behavior. But there is now good reason to believe that another factor increases our accuracy of interpersonal predictions or prophecies. Our prediction or prophecy may in itself be a factor in determining the behavior of other people.\(^{61}\)

A reasonable assumption is that the positive value attached to the achievement of good grades in school exerts a distorting effect upon teachers' judgments. In many instances, the teacher is acquainted with a student's scores on standardized aptitude and achievement tests, as well as with his previous school record. Here the teacher's values are especially prone to influence his judgment of the student.\(^{62}\)

Smith and Dechant state that:

We wish to know how a child's personality traits may influence his reading and how reading failure or success may influence the development of the child's personality. The self has needs that demand satisfaction. Because reading, in our culture, is an essential developmental task, failure in reading can block the child's attempts

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to satisfy this need for self-esteem within the culture.\textsuperscript{63}

Brookover says a relevant aspect of self concept in school learning is the person's conception of his own ability to learn the accepted types of academic behavior performance in terms of school achievement in various areas.\textsuperscript{64} In a sample of 1,050 seventh grade students and a selected sub-sample of 110 over-and-under achieving students, a significant positive relationship was found between self-concept of ability and grade point average.\textsuperscript{65}

Schreiber found that grade school children who are poor readers also show symptoms of psychological maladjustment and weak self-concepts. Using a sampling of children, ages seven through twelve, Schreiber found that all of the poor readers manifested maladjustment in each of the following ten personality factors: (1) fluctuation of attention, (2) immaturity, (3) restlessness, (4) insecurity, (5) hostility, (6) anxiety, (7) sensitivity, (8) withdrawal, (9) daydreaming and (10) negativism. Each child also maintained a weak self-concept. He describes the poor reader as a

\begin{itemize}
\item \textsuperscript{63}Henry P. Smith and Emerald V. Dechant, Psychology in Teaching Reading (Englewood Cliffs: Prentice-Hall, 1961), p. 297.
\item \textsuperscript{64}Wilber B. Brookover and Thomas Shailer, "Self-Concept of Ability and School Achievement," Sociology of Education (Spring, 1964), pp. 271-278.
\item \textsuperscript{65}Ibid., p. 271.
\end{itemize}
passive-dependent person who lacks self-confidence and self-reliance.  

In another study found in the literature designed to investigate the relationship between the self-concept and the grade-point average of elementary children, Bruck used as his subjects 300 students of both sexes at the third, sixth, and eleventh-grade levels. He found that "a positive and significant relationship exists between self-concept and grade-point average on all grade levels ranging from the one to the five per cent level of confidence."  

Bledsoe, using 271 fourth- and sixth-grade boys and girls found that at both grade levels there were significant correlations between the self-concepts of the boys and their scores on all the subtests of the California Achievement Test. For the girls, the results were somewhat less conclusive:

Although all except one of the fourteen relationships between self-concept and achievement for girls were non-significant, the direction was positive. The one significant relationship was .29 between self-concept and reading achievement for fourth-grade girls.

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69 Ibid., p. 436.
In a study involving both boys and girls, Hallock investigated the relationship between achievement in reading, as measured by the California Reading Achievement Test, and twelve personality factors, as measured by the California Test of Personality. For the 926 subjects in the fourth, sixth, and eighth grades, eight factors were found to be significantly related to achievement. They were:

1. family relations,
2. self-reliance,
3. anti-social tendencies,
4. school relations,
5. feeling of belonging,
6. withdrawing tendencies,
7. nervous symptoms,
8. feeling of personal worth.

Several of these, particularly 2, 4, 5, 6, and 8, were perceived as being closely related to one's view of himself.\(^7\)

Lumpkin,\(^7\) matched twenty-four overachievers in reading with twenty-five underachievers on the basis of chronological age, mental age, sex, and home background. Several psychological instruments were used to gather data on the self-concept of the students. The results indicated that:

... overachievers revealed significantly more positive self-concepts, revealed higher levels of adjustment, and saw themselves as liking reading. These children were

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\(^7\) Jonavan D. Lumpkin, "The Relationship of Self-Concept to Achievement in Reading," *Dissertation Abstracts*, XX (1959), pp. 204-205.
viewed positively by both teachers and peers.

Underachievers in reading . . . manifested a pre-dominantly negative perception of self, a desire to be different from the self as seen, and, to a statistically significant extent, they expressed feelings of conflict more frequently. They were viewed by teachers as manifesting high problem tendency.72

Spicola, using 381 sixth-grade boys as her subjects, investigated the relationship between achievement in reading and seven variables—chronological age, mental age, socioeconomic status, socioeconomic index, self-concept, school entrance age, and educational level of father. Significant correlations at the .05 level were found between reading achievement and five of these variables, including that of the self-concept.73

Educators have recognized for a long time that sex differences affect reading achievement, particularly in the primary grades. Boys, for a variety of reasons, get off to a much slower start than do girls. Boys are usually introduced to reading by female teachers, which may have some adverse effects on their views toward the reading act. Research indicates that disparity between boys and girls in reading achievement appears in the first grade.74

72 Ibid., p. 205.
74 Nicholas Criscuolo, "Sex Influences on Reading," The Reading Teacher, XXI (May, 1968), pp. 762-764.
Spache made this observation:

The differential success of boys and girls in American schools may be interpreted as reflecting some natural hereditary differences in physiological development, however we believe it may more accurately be attributed to such factors as the attitudes of women teachers toward boy pupils, the socially-conforming attitudes of American girls, and the proportion of male teachers in primary schools.  

Gates made an analysis of the significance of sex differences on the Gates Reading Survey Test for 6,646 boys and 6,468 girls in grades two through eight in twelve school systems in ten states in 1957. Mean raw scores on reading speed, vocabulary, and level of comprehension consistently favored the girls, in most instances significantly so. A greater proportion of boys received low scores, and their scores were more variable than girls' except in speed of reading in grades two, three and six. Gates believed that environmental rather than maturity factors are the more likely explanation of the superior performance of girls.  

Konski compared the reading readiness scores of boys and girls at the beginning of first grade and found no significant differences. A comparison at the end of first  

75 George D. Spache and Evelyn B. Spache, Reading In The Elementary School (Boston: Allyn and Bacon, Inc., 1969), p. 47.

grade, however showed that girls had pulled ahead of boys in reading achievement. 77

McNeil reinforces the hypothesis that boys learn more readily with a self-instructional program than with direct teacher instruction by reporting that boys actually scored better than girls on a word recognition test administered after a program in programmed reading without a teacher on the kindergarten level. A retest after four months under a teacher in first grade revealed that the situation was reversed and that the girls had surpassed the boys in achievement. 78

Palardy's study supports these facts: That very often boys do less well in beginning reading than girls. The explanation for this is that boys are less successful than girls in beginning reading because their teachers believe that they will be less successful. He found that if this is a possible explanation, then its converse would be true; namely, that other boys are as successful as girls in beginning reading because their teachers believe that they will be as successful. 79


The final study to be considered in this review of the literature is a social research study underwritten by the National Institute of Mental Health. This study was conducted over a three-year period in a school system of 12,000 students of varying ethnic and socioeconomic background. It was found that women set the pace, enforce the rules, and establish the atmosphere in elementary schools. Sexton reports that while the performance of boys, as measured by report card marks given by teachers, was on the average lower than that of girls, their performance on standardized tests of achievement in most cases equaled or exceeded the performance of girls. This disparity seems to indicate that schools do not tap the academic potential of boys as well as they do that of girls.80

Rosenthal concluded that, as teacher training institutions begin to teach the possibility that teachers' expectations of their pupils' performance may serve as self-fulfilling prophecies, there may be a new expectancy created. The new expectancy may be that children can learn more than had been believed possible, an expectation held by many educational theorists.81

SUMMARY OF THE REVIEW OF THE LITERATURE

The earliest related research reviewed was the work reported by W. I. Thomas on the self-fulfilling prophecy. The Thomas theorem was later supported by Merton through several research studies completed in the area of the Social Sciences. More recently, Rosenthal and Jacobson, Claiborn, and Palardy studied the effect of the self-fulfilling prophecy within the classroom and achieved varying results. These studies reopened the question of the validity of the self-fulfilling prophecy.

The literature presented on the assumptions that teachers influence the pupils' self-concept and that the self-concept of pupils affect their achievement was almost completely supported. The Morse study concerning teacher influences on pupils' self-concept concluded that "While neither the self-picture nor the school self-esteem is pleasant . . . we have communicated a sense of personal failure to many of our pupils. In general, the longer we have them, the less favorable things seem to be."82 All of the empirical research studies or investigations reviewed, with the exception of the Chadwich study,83 reported findings indicative of the fact that teachers do influence the

82 Morse, loc. cit.
83 Chadwich, loc. cit.
pupils' self-concept either positively or negatively and on purpose or accidentally. In thirteen other empirical research studies or investigations, findings reported a positive relationship between a pupils' self-concept and his level of academic achievement.
CHAPTER III

METHODOLOGY OF THE STUDY

The purpose of this study was to investigate the effect of teachers' reported expectations regarding the probable success of first-grade boys in learning to read on the measured achievement in reading which the pupils in their classes attained. The major concern was to investigate the effect of these expectations on the achievement of boys. The present chapter describes the samples selected and the instruments and procedures used in the study in order to achieve this purpose.

I. SELECTION OF THE SAMPLE

Questionnaire. In October, 1969, the form letter and the questionnaire (see Letter, Appendix A and Questionnaire, Appendix B) were sent to all 222 first-grade teachers in the East Baton Rouge Parish schools. The questionnaire was designed to gain information from the teachers in four general areas. Initially, an item was designed to determine if the pupils had been administered the Pre-Reading Test of Scholastic Ability. Items one through five asked for personal information; items six through nine asked for information about the pupils in their classrooms; and items ten
through sixteen sought information regarding their opinions and expectations about certain issues within the field of reading instruction and differences between boys and girls. Of the 116 questionnaires returned, two were anonymous, four were from teachers not currently teaching first grade, and nine were incomplete or inaccurate, leaving 101 usable returns.

The 101 teachers were placed into one of three categories on the basis of their responses to items twelve, thirteen, fourteen, fifteen, and all except the first four responses to item sixteen. There were thirty-five scorable responses, one each for questions twelve through fifteen and thirty-one for question sixteen. The items were weighted according to the method originated by Likert. Each question was divided into five areas and allotted scores ranging from one to five. A teacher's total score, the sum of these individual scores, was used to discriminate between teachers with very high expectations and teachers with very low expectations concerning the probable success of first-grade boys.

The first group, Group A, consisted of the twenty-five teachers who scored high enough to be in the upper

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twenty-five per cent. These twenty-five teachers were assumed to expect that first-grade boys are as successful or more successful than first-grade girls in learning how to read. Group B was composed of the twenty-six teachers who scored low enough to be in the lower twenty-five per cent. These twenty-six teachers, it was assumed, expected that first-grade boys are considerably less successful than girls in learning to read. And Group C consisted of the fifty teachers who scored in the middle fifty per cent of the usable questionnaires returned. It was assumed that their reported expectations were not sufficiently different from either Group A teachers or Group B teachers to be used in this investigation. These data are summarized in Table I.

TABLE I

TEACHERS' REPORTED EXPECTATIONS CONCERNING THE PROBABLE SUCCESS OF FIRST-GRADE BOYS IN LEARNING TO READ AS COMPARED TO GIRLS EXPRESSED IN SCORE FORM

<table>
<thead>
<tr>
<th>Range of Scores</th>
<th>Per Cent of Scores</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>116-163</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>91-115</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>52-90</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>101</td>
</tr>
</tbody>
</table>

Since the purpose of items twelve, thirteen, fourteen, fifteen, and sixteen was to identify groups of teachers who had differing expectations about the probable
success in reading of first-grade boys relative to the success of first-grade girls, it was determined that the items had been successful, particularly in differentiating the Group A teachers from the Group B teachers. The Group C teachers were eliminated at this time from further consideration because it was thought that their reported expectations were not sufficiently different from those of either the Group A teachers or the Group B teachers.

An attempt was then made to match as many teachers as possible in Group A with a like number in Group B. It was decided that this would be done on the basis of three criteria. In the first place, only those teachers who had at least three years of first-grade teaching experience, including the year in which the study was being conducted, would be eligible. This criterion was considered important because it was thought that the teachers' reported expectations concerning the probable reading success of boys as contrasted with that of the girls should be based on having taught several different classes of first-grade students. The information gained from item three of the questionnaire indicated that four teachers in Group A and six teachers in Group B did not meet this criteria.

The second criterion was that only those teachers who had at least a Bachelor's degree would be eligible for final participation. This was considered highly desirable because it was thought that it would help to negate extreme
variations in the amount of teacher training which the teachers might have had, training which might have affected their expectations about sex differences in ability for learning to read. Item four of the questionnaire presented evidence that all teachers in Group A and all teachers in Group B satisfactorily met this requirement.

Finally, since it was thought that the teachers' expectations concerning the ability of boys to succeed in reading might be differently affected by the socioeconomic area of the school in which they were employed, only those teachers who taught in schools located in middle-class neighborhoods were considered. In order to determine which of the East Baton Rouge Parish elementary schools were located in middle-class neighborhoods, two elementary supervisors were asked independently to rank all of the schools on a one, two, three basis. A rank of one indicated that a school was located in a lower-class neighborhood; a rank of two indicated that a school was located in a middle-class neighborhood; and a rank of three that a school was located in an upper-class neighborhood.

Although no attempt was made to define for the two supervisors the meaning of lower-class, middle-class, and upper-class neighborhoods, they agreed on their ranking on sixty-nine of the seventy-nine schools. Furthermore, they were in complete agreement on all twenty-three of the schools in which the Group A teachers and the Group B
teachers were employed.

On the basis of the rankings given the schools by the supervisors, ten teachers were eliminated from further consideration. One teacher in Group A was employed in a school said to be located in an upper-class neighborhood, and five teachers in Group A and four teachers in Group B were employed in schools said to be located in lower-class neighborhoods.

Table II summarizes the number of teachers from both Group A and Group B who were eliminated from the sample and the reasons for their elimination.

<table>
<thead>
<tr>
<th>TABLE II</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRITERIA FOR THE ELIMINATION OF GROUP A AND GROUP B TEACHERS</td>
</tr>
<tr>
<td>Criteria</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Experience</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Socioeconomic Level</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

From the original number of twenty-five teachers in Group A and twenty-six teachers in Group B, fifteen teachers in Group A and sixteen teachers in Group B met the three criteria as described above. One teacher from Group B, the one with the highest score on the questionnaire, was
eliminated from further consideration and the groups were then considered to be matched on a group-to-group basis. These fifteen teachers were then matched on a one-to-one basis in terms of their years of first-grade teaching experience. The teachers were then placed in rank order from one to fifteen within each group with the number one indicating the least number of years experience and the number fifteen the most number of years experience. This, in effect, matched each teacher in Group A with a teacher in Group B. The following table, Table III, shows the results of the procedure followed and the matched pairs constituting the Group A teachers and Group B teachers.

**TABLE III**

**TEACHERS MATCHED ACCORDING TO EXPERIENCE FOR GROUP A AND GROUP B**

<table>
<thead>
<tr>
<th>Matched-Pairs</th>
<th>Group A Years of Experience</th>
<th>Group B Years of Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matched-Pair 1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Matched-Pair 2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Matched-Pair 3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Matched-Pair 4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Matched-Pair 5</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Matched-Pair 6</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Matched-Pair 7</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Matched-Pair 8</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Matched-Pair 9</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Matched-Pair 10</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Matched-Pair 11</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Matched-Pair 12</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td>Matched-Pair 13</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>Matched-Pair 14</td>
<td>20</td>
<td>26</td>
</tr>
<tr>
<td>Matched-Pair 15</td>
<td>38</td>
<td>30</td>
</tr>
</tbody>
</table>
The questionnaire also indicated that the thirty teachers were all female and that all reportedly had either three or four reading groups in their classes. Only one teacher reported individualization of instruction and this was to be done after the groups were functioning. It was discovered later that all of the teachers were Caucasian except for two Negro teachers, both in Group A. All of the teachers, according to their principals' statements, were teaching heterogeneously-grouped pupils within a self-contained classroom setting. In addition, it seemed that very similar methods and materials were used by the teachers for the purpose of reading instruction.

After forming the different teacher groups from the results of their responses to the questionnaire items and matching them as closely as possible by the above mentioned criteria, the writer was satisfied that their reported expectation, relative to the success of first-grade boys in learning to read, represented a true difference between the two groups.

Interviews. In February, after the questionnaires had been returned and their results studied, a parish wide memo (see Memo, Appendix C) was sent to the first grade teachers selected for study, their principals, the elementary supervisors, and supervisor of instruction. Each teacher was asked to mail a list of the readiness test
scores to the investigator. These scores were obtained by the classroom teacher in September of the current school year.

In March, an interview was held with each of the thirty teachers and their principals. The purpose of the interview with the principals was to inform them of the research project and secure their permission to talk with the teachers. Then, the teacher interviews were held to obtain their cooperation in permitting their pupils to be used as subjects in the study. The teachers were first informed that permission had been received earlier from the East Baton Rouge Parish School Board and from the principals of their respective schools to ask for their cooperation. They were also told that they would be asked to administer two tests to their pupils, a standardized group intelligence test and a reading achievement test. Finally, the teachers were told that the tests would be scored by the writer and the results made available to them if the parish officials would permit.

During the course of the interview each teacher was told that she had been randomly selected from among those who had returned the questionnaire, and that all the data gathered would be used as the basis for a general survey of first-grade reading practices and procedures. The idea that the study could reveal reasons for the differences in achievement for boys and girls at the first-grade level was
minimized as much as possible to obscure any ideas the teachers might have formulated about the purpose of the study.

Twenty-eight of the thirty teachers, fourteen of the fifteen matched pairs, agreed to participate in the study. One of the teachers in matched-pair five (Table III) had resigned her position and moved to another school between the time of the completion of the questionnaire and the interview. Therefore, both teachers in that matched-pair were automatically excluded from further investigation at this time.

Pupil sample. At the time the questionnaire was filled out by each of the thirty teachers, there was a total of 353 pupils, 168 boys and 185 girls, in Group A, and 383 pupils, 197 boys and 186 girls, in Group B.

During the initial stages of the study, one teacher in matched-pair five (Table III) moved to another school. Therefore, she and her match had to be eliminated from further study. This left twenty-eight teachers, fourteen in each group, whose pupils became eligible as the subjects for further evaluation.

Since it was thought that no first-grade repeaters should be included in the investigation, eight boys and six girls in Group A and fourteen boys and four girls in Group B were eliminated. Table IV gives a summary of the number
of qualifying boys and girls in each group for whom complete data were collected. Complete data, in the form of reading readiness scores, reading achievement scores, and intelligence quotients were obtained on the 656 remaining pupils.

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Boys</th>
<th>Girls</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>147</td>
<td>167</td>
<td>314</td>
</tr>
<tr>
<td>B</td>
<td>169</td>
<td>173</td>
<td>342</td>
</tr>
<tr>
<td></td>
<td>316</td>
<td>340</td>
<td>656</td>
</tr>
</tbody>
</table>

A series of controls were established beforehand for several variables, other than the expectations of teachers, that might have accounted for any differences among the four groups of pupils in their performance on the reading achievement test. They are presented in the following sections.

**Pupils' socioeconomic level.** The pupils of the twenty-eight teachers finally selected for this study were considered to be from families having middle-class status, since one of the criteria used to match the teachers in the two groups was the stipulation that only those employed in
schools located in middle-class neighborhoods would be considered eligible for participation in the study. It was also noted that all of the East Baton Rouge Parish schools at the time of the study were neighborhood schools.

**Pupils' chronological age.** A general assumption among most reading authorities reveals that there is very little basis for choosing a specific chronological age as a criterion for successful achievement in reading. Even so, in order to control for the effect any variations in age might have had, it was decided that only those pupils ranging in age between six years-three months, and seven years-three months on April 1, 1970, would be included in the final sample. The ten boys and the five girls in Group A and the sixteen boys and the four girls in Group B who did not qualify according to this criterion were eliminated from the final sample.

The mean chronological age of each of the four groups of pupils constituting the final sample is presented in Table V. There appeared to be no observable differences among any of the four groups relative to mean chronological age.

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85Smith and Dechant, *op. cit.*, pp. 105-106.
TABLE V
MEAN CHRONOLOGICAL AGES BY MONTHS FOR THE FOUR PUPIL SAMPLE GROUPS

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>81.545</td>
<td>81.151</td>
</tr>
<tr>
<td>B</td>
<td>80.620</td>
<td>80.900</td>
</tr>
</tbody>
</table>

Pupils' reading readiness. The reading readiness scores of the pupils were obtained from their teachers via cumulative folders in an attempt to control partially for what might have been a considerable difference in the reading readiness of the four groups. These scores had been made on the Pre-Reading Test of Scholastic Ability to Determine Reading Readiness, devised under the direction of Byron H. VanRoekel and Peggy Ramstad and published by Harper and Row to accompany its basal reading series.

The Pre-Reading Test of Scholastic Ability to Determine Reading Readiness, which was administered by nearly all of the first-grade teachers in East Baton Rouge Parish in mid September has six sections: visual discrimination, auditory similarities (rhyming words), relationships, auditory similarities (initial sounds), concepts, and story interpretation. Norms for the test are based on the performance of 772 pupils from twenty-eight schools in twenty-one communities in nine states. For purposes of interpreting the
results of the test, three ranges of scores are suggested by the authors: 0-55 (group C), 56-102 (group B), and 103-133 (group A).  

It was decided that only those pupils that scored in the B and A ranges on the test would qualify as subjects. As a result, the eight boys and the six girls in Group A and the five boys and the three girls in Group B who scored in the "C" category were considered ineligible and were not included in the final sample.

Table VI presents the mean reading readiness scores of the four groups of pupils comprising the final sample. It was decided, on the basis of these mean scores, that no observed differences existed among the groups relative to the criteria of reading readiness.

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>98.880</td>
<td>100.134</td>
</tr>
<tr>
<td>B</td>
<td>102.287</td>
<td>102.979</td>
</tr>
</tbody>
</table>

Pupils' intelligence quotients. The Otis-Lennon Mental Ability Test, Elementary 1 Level, form J, was

administered by all teachers in the sample to their pupils during the early part of April. The teachers were instructed concerning the directions for administering the test, however, all of the scoring was done by this writer. This test was given in order to investigate whether the groups of pupils being compared in terms of their achievement in reading also had comparable intelligence quotients.

The *Otis-Lennon Mental Ability Test, Elementary 1 Level* employed in this study is one of six successive levels in the *Otis-Lennon Mental Ability Test series*. This test was devised by Arthur S. Otis and Roger T. Lennon. The norms for the entire series were standardized in 1967 and based on the testing of approximately 2,000,000 pupils in 117 school systems drawn from all 50 states. The Elementary 1 Level, which was specifically chosen because it required a total testing time of approximately fifty-seven minutes, is designed for the last half of grade one through grade three. The test consists of only pictorial-type test items and requires no reading. These items sample the mental processes of classification, following directions, quantitative reasoning, comprehension of verbal concepts, and reasoning by analogy.87

The mean intelligence quotient of each of the four groups of pupils constituting the final sample is presented

in Table VII. It was decided that no major difference existed among the four groups relative to the factor of intelligence.

**TABLE VII**

**MEAN INTELLIGENCE QUOTIENTS FOR THE FOUR PUPIL SAMPLE GROUPS**

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>99.769</td>
<td>100.353</td>
</tr>
<tr>
<td>B</td>
<td>102.350</td>
<td>104.396</td>
</tr>
</tbody>
</table>

**II. TEST MATERIALS AND METHODS USED**

The following procedure was utilized in order to test the null hypothesis that there is no statistically significant difference in reading achievement scores between pupils classified according to sex and according to their teachers' expectations concerning the probable success of first-grade boys in learning to read. Form W of the **Stanford Reading Test, Primary 1**, was administered to the pupils in early April by the twenty-eight teachers in the two groups. The directions for administering the test were carefully explained to all of the teachers. The investigator later accomplished the task of scoring and interpreting the test results.
The 1964 edition of the Stanford Reading Test used in this study is one of the sub-test batteries in the Stanford Achievement Test devised by Truman L. Kelley, Richard Madden, Eric F. Gardner, and Herbert C. Rudman. The norms for this series, which were standardized in 1963, are based upon the testing of over 850,000 pupils in a total of 264 school systems drawn from all fifty states. The primary 1 Reading Tests are utilized for use with pupils from the middle of grade one to the middle of grade two and consists of four sections: word reading, paragraph meaning, vocabulary, and word-study-skills.  

III. SUMMARY

The major purpose of this investigation was to determine the effect of teachers' reported expectations concerning the probable success of first-grade boys in learning to read on the actual achievement in reading which the pupils in their classes attained. In order to accomplish this goal, all 222 first-grade teachers in the East Baton Rouge Parish schools were sent a questionnaire in early October. Items ten through sixteen were designed to elicit from the teachers a report of their expectations

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regarding the ability of first grade boys to succeed in reading.

On the basis of the usable questionnaires which were returned, 101 teachers were divided into three groups. Group A consisted of twenty-five teachers who expected that first-grade boys are more successful or as successful as first-grade girls in learning to read. Group B was composed of twenty-six teachers who expected that first-grade boys were considerably less successful than girls in learning to read. Group C consisted of the fifty teachers eliminated from further study because their expectations were not considered to be sufficiently different from either Group A teachers or Group B teachers.

Fourteen teachers in Group A were then matched with fourteen teachers in Group B. Each of the teachers had at least three years of first-grade teaching experience, each had at least a Bachelor's degree, and each was employed in a school said to be located in a middle-class neighborhood.

The mean reading achievement scores of 118 boys and 133 girls whose teachers constituted Group A and of 132 boys and 149 girls whose teachers constituted Group B were obtained from the Stanford Reading Test, which was administered in the early part of April. Several of the variables which might have contributed to a difference in the achievement of the four pupil sample groups were accounted for. These were:
(1) their scores on the **Pre-Reading Test of Scholastic Ability to Determine Reading Readiness** published by Harper and Row, (2) their socioeconomic level, (3) their chronological age, and (4) their intelligence quotients as measured by the **Otis-Lennon Mental Ability Test**.
CHAPTER IV

PRESENTATION OF FINDINGS

I. THE NULL HYPOTHESIS TESTED

The null hypothesis was used in this study to determine whether teachers' expectations regarding the probable reading success of first-grade boys have any significant effect on their achievement in reading. The null hypothesis stated that there would be no statistically significant difference between reading achievement scores of pupils classified according to sex and as a result of their teachers' expectations concerning the probable success of first-grade boys in learning to read. This hypothesis can be restated in three parts to facilitate interpretation of data. These three parts of the null hypothesis are stated below:

1. There is no statistically significant difference between reading achievement scores of pupils classified according to sex.

2. There is no statistically significant difference between reading achievement scores of pupils classified according to their teachers' expectations concerning the probable success of first-grade boys in learning to read.
3. There is no statistically significant interaction between reading achievement scores and pupils, classified both according to their sex and their teachers' expectations.

The three parts of the null hypothesis were used to test over-all reading achievement, word reading, paragraph meaning, vocabulary, and word-study-skills.

In order to adequately test the above mentioned hypothesis and to answer the questions set forth in Chapter I, it was necessary to subject each hypothesis to an analysis of covariance. The statistical model used was a two-way analysis of variance with pupils' intelligence quotients serving as the covariable. Since the pupils' intelligence quotients served as the covariable, the four pupil groups were equated statistically in terms of this factor before any comparisons were made between and/or among them. Levels of statistical significance were set at .05 and the F-ratio tested for significance.

**Over-all reading achievement scores.** The null hypothesis for this study stated that there was no statistically significant difference between over-all reading achievement scores of pupils classified according to sex and as a result of their teachers' expectations concerning the probable success of first-grade boys in learning to read. To test this hypothesis the teachers who expected
that first-grade boys are either more successful or as successful as first-grade girls in learning to read were designated as Group A teachers, and those who believed that first-grade boys are considerably less successful than first-grade girls were designated as Group B teachers.

The analysis of variance of scores in over-all reading achievement of pupils classified according to sex and expectations of teachers with pupils' intelligence quotients statistically controlled is presented in Table VIII.

It can be seen in this table, as shown by the 16.590 value of F for the sex variation, that there was a statistically significant difference between over-all reading achievement scores of pupils classified according to sex. Therefore, the null hypothesis of no statistically significant difference was rejected at the .01 level of confidence in favor of the alternative hypothesis that there is a statistically significant difference between over-all reading achievement scores of pupils classified according to sex.

An inspection of the total sex means in Table IX indicates that the girls achieved significantly higher scores than the boys. The mean of the girls was 82.646 while the mean of the boys was 75.090. The difference of 7.556 was significant at the .01 level. Therefore, it can be concluded that the effect of sex alone did result in statistically significant different over-all reading
# TABLE VIII

ANALYSIS OF VARIANCE OF SCORES ON OVER-ALL READING ACHIEVEMENT OF PUPILS CLASSIFIED ACCORDING TO SEX AND EXPECTATIONS OF THEIR TEACHERS, WITH PUPILS' INTELLIGENCE QUOTIENTS SERVING AS A COVARIABLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1</td>
<td>7495.723</td>
<td>7495.723</td>
<td>16.590*</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>3669.865</td>
<td>3669.865</td>
<td>8.122*</td>
</tr>
<tr>
<td>Sex x Group</td>
<td>1</td>
<td>31.375</td>
<td>31.375</td>
<td>0.069</td>
</tr>
<tr>
<td>Intelligence Quotients</td>
<td>1</td>
<td>121674.590</td>
<td>121674.590</td>
<td>269.295*</td>
</tr>
<tr>
<td>Remainder</td>
<td>527</td>
<td>238112.471</td>
<td>451.826</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .01 level of confidence.

# TABLE IX

LEAST SQUARES MEAN SCORES ON OVER-ALL READING ACHIEVEMENT FOR THE FOUR PUPIL GROUPS

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Mean Scores</th>
<th>Total Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>A</td>
<td>72.667</td>
<td>77.514</td>
</tr>
<tr>
<td>B</td>
<td>79.734</td>
<td>85.557</td>
</tr>
<tr>
<td>Total Sex</td>
<td>75.090</td>
<td>82.646</td>
</tr>
</tbody>
</table>
The second significant difference at the .01 level of confidence, Table VIII, was noted when comparing over-all reading achievement by teacher groups. The null hypothesis of no statistically significant difference was rejected in favor of the alternative hypothesis that there is a statistically significant difference between over-all reading achievement scores of pupils classified according to their teachers' expectations.

The total group mean found in Table IX indicate that Group B achieved significantly higher over-all reading achievement scores than did Group A. Therefore, it can be concluded that the effect of teachers' expectations did result in a significant difference between scores of pupils classified according to teacher expectations.

An F-ratio of only .069 (3.87 needed for significance at the .05 level of confidence) was found for the sex by group variation in Table VIII. The interaction effect of sex and teachers' expectations was not statistically significant. Consequently, the null hypothesis that there is no statistically significant interaction between over-all reading achievement scores and pupils classified both according to their sex and their teachers' expectations was accepted.

Finally, an F-ratio of 269.295 was found to be significant at the .01 level for the effect of intelligence on
over-all reading achievement score. This was expected since it indicates that pupils who scored low on the over-all reading achievement test had low intelligence quotients and those who scored higher had higher intelligence quotients.

**Word reading scores.** The null hypothesis to be tested was that there is no statistically significant difference between word reading scores of pupils classified according to sex and according to their teachers' expectations concerning the probable success of first-grade boys in learning to read.

Presented in Table X are the data resulting from the analysis of covariance for the null hypothesis. The F-ratio of 5.726, for the analysis of covariance by sex was significant since only a 3.87 was needed in order that the difference might be termed significant at the .05 level. Therefore, the null hypothesis of no statistically significant difference between word reading scores of pupils classified according to sex was rejected.

An inspection of the total sex means in Table XI indicates that the girls in both groups achieved significantly higher mean scores than the boys in both groups. Therefore, it can be concluded that the effect of sex alone did result in statistically significant different word reading scores.
### TABLE X
ANALYSIS OF VARIANCE OF SCORES ON WORD READING OF PUPILS CLASSIFIED ACCORDING TO SEX AND EXPECTATIONS OF TEACHERS, WITH PUPILS' INTELLIGENCE QUOTIENTS SERVING AS A COVARIABLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1</td>
<td>179.607</td>
<td>179.607</td>
<td>5.726*</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>225.256</td>
<td>225.256</td>
<td>7.181**</td>
</tr>
<tr>
<td>Sex x Group</td>
<td>1</td>
<td>11.600</td>
<td>11.600</td>
<td>0.370</td>
</tr>
<tr>
<td>Intelligence Quotients</td>
<td>1</td>
<td>6863.757</td>
<td>6863.757</td>
<td>218.823**</td>
</tr>
<tr>
<td>Remainder</td>
<td>527</td>
<td>16530.284</td>
<td>31.367</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level of confidence.
**Significant at .01 level of confidence.

### TABLE XI
LEAST SQUARES MEAN SCORES ON WORD READING FOR THE FOUR PUPIL GROUPS

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Mean Scores</th>
<th>Total Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>A</td>
<td>14.984</td>
<td>16.008</td>
</tr>
<tr>
<td>B</td>
<td>15.856</td>
<td>17.475</td>
</tr>
<tr>
<td>Total Sex</td>
<td>15.496</td>
<td>16.666</td>
</tr>
</tbody>
</table>
A significant difference, at the .01 level of confidence, was found when testing word reading by teacher group. An F-ratio of 7.181 as shown in Table X was computed when comparing word reading mean scores by teacher group. The mean word reading scores of pupils by teacher group is presented in Table XI. The total group means indicate that Group B achieved significantly higher word reading scores than did Group A. Therefore, it can be concluded that the effect of teachers' expectations alone did result in statistically significant different word reading scores.

An F-ratio of only .370 (3.87 needed for significance at the .05 level of confidence) was found for the sex by group variation in Table X. The interaction effect of sex and teachers' expectations was not statistically significant. Consequently, the null hypothesis that there is no statistically significant interaction between word reading scores and pupils classified both according to their sex and their teachers' expectations was accepted.

Finally, the F-ratio of 218.823 which resulted in the comparison of the effect of intelligence on word reading scores was statistically significant at the .01 level of confidence.

**Paragraph meaning scores.** The null hypothesis to be tested was that there is no statistically significant difference between paragraph meaning scores of pupils classified according to sex and according to the probable
success of first-grade boys in learning to read.

Presented in Table XII are the data resulting from the analysis of covariance for the null hypothesis. The F-ratio of 20.957 for the sex variation in this table shows that there was a significant difference between paragraph meaning scores of the boys and the girls who made up the pupil sample at the .01 level of confidence. Therefore, the null hypothesis of no statistically significant difference between paragraph meaning scores of pupils classified according to sex was rejected in favor of the alternative hypothesis that there is a statistically significant difference between paragraph meaning scores of pupils classified according to sex.

An inspection of the total sex means in Table XIII indicates that the girls in both groups achieved significantly higher mean scores on the paragraph meaning section than did the boys in both groups. Therefore, it can be concluded that the effect of sex alone did result in statistically significant different mean paragraph meaning scores.

A significant difference, at the .05 level of confidence, was found when testing paragraph meaning scores by teacher group. An F-ratio of 6.626 as shown in Table XII was computed when comparing paragraph meaning scores by teacher group. The mean paragraph reading score of pupils by teacher group is presented in Table XIII. The total
TABLE XII
ANALYSIS OF VARIANCE OF SCORES ON PARAGRAPH MEANING OF PUPILS CLASSIFIED ACCORDING TO SEX AND EXPECTATIONS OF TEACHERS, WITH PUPILS' INTELLIGENCE QUOTIENTS SERVING AS A COVARIABLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1</td>
<td>927.285</td>
<td>927.285</td>
<td>20.957**</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>299.492</td>
<td>299.492</td>
<td>6.626*</td>
</tr>
<tr>
<td>Sex x Group</td>
<td>1</td>
<td>8.120</td>
<td>8.120</td>
<td>0.180</td>
</tr>
<tr>
<td>Intelligence Quotients</td>
<td>1</td>
<td>6429.370</td>
<td>6429.370</td>
<td>142.237**</td>
</tr>
<tr>
<td>Remainder</td>
<td>527</td>
<td>23821.355</td>
<td>45.202</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level of confidence.
**Significant at .01 level of confidence.

TABLE XIII
LEAST SQUARES MEAN SCORES ON PARAGRAPH MEANING FOR THE FOUR PUPIL GROUPS

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Mean Scores</th>
<th>Total Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>A</td>
<td>11.123</td>
<td>12.896</td>
</tr>
<tr>
<td>B</td>
<td>14.058</td>
<td>15.333</td>
</tr>
<tr>
<td>Total Sex</td>
<td>12.010</td>
<td>14.695</td>
</tr>
</tbody>
</table>
group means indicate that Group B achieved significantly higher paragraph meaning scores than did Group A. Therefore, it can be concluded that the effect of teacher expectations alone did result in statistically significant different paragraph meaning scores.

An F-ratio of only .180 (3.87 needed for significance at the .05 level of confidence) was found for the sex by group variation in Table XII. The interaction effect of sex and teachers' expectations was not statistically significant. Consequently, the null hypothesis that there is no statistically significant interaction between paragraph meaning scores and pupils classified both according to their sex and their teachers' expectations was accepted.

Finally, the F-ratio of 142.237 which resulted in the comparison of the effect of intelligence on paragraph meaning scores was statistically significant at the .01 level of confidence.

Vocabulary scores. The null hypothesis to be tested was that there is no statistically significant difference between vocabulary scores of pupils classified according to sex and according to their teachers' expectations concerning the probable success of first-grade boys in learning to read.
Presented in Table XIV are the data resulting from the analysis of covariance for the null hypothesis. The F-ratio of 3.817 for the sex variation in this table was not significant since 3.87 was needed in order that the difference might be termed significant at the .05 level. Therefore, the null hypothesis of no statistically significant difference between vocabulary scores of pupils classified according to sex was accepted. The conclusion that can be drawn from this finding is that the effect of sex alone did not result in statistically significant different vocabulary scores for the boys and the girls.

The group variation in Table XIV, an F-ratio of 2.730, indicates that there was no statistically significant difference between vocabulary mean scores of the Group A pupils and the Group B pupils. These mean vocabulary scores are given in Table XV. As a result, the null hypothesis of no statistically significant difference between vocabulary mean scores of pupils classified according to their teachers' expectations was accepted. Therefore, it can be concluded that the effect of teachers' expectations alone did not result in a significantly higher mean vocabulary score for either group.

An examination of the F-ratio of .017 for the sex by group variation in Table XIV shows that there was no statistically significant difference between mean vocabulary scores among the groups. Therefore, the null hypothesis of
### TABLE XIV

**ANALYSIS OF VARIANCE OF SCORES ON VOCABULARY OF PUPILS CLASSIFIED ACCORDING TO SEX AND EXPECTATIONS OF TEACHERS, WITH PUPILS' INTELLIGENCE QUOTIENTS SERVING AS A COVARIABLE**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1</td>
<td>138.073</td>
<td>138.073</td>
<td>3.817</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>98.766</td>
<td>98.766</td>
<td>2.730</td>
</tr>
<tr>
<td>Sex x Group</td>
<td>1</td>
<td>0.618</td>
<td>0.618</td>
<td>0.017</td>
</tr>
<tr>
<td>Intelligence Quotients</td>
<td>1</td>
<td>7487.531</td>
<td>7487.531</td>
<td>206.992*</td>
</tr>
<tr>
<td>Remainder</td>
<td>527</td>
<td>19063.217</td>
<td>36.173</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .01 level of confidence.

### TABLE XV

**LEAST SQUARES MEAN SCORES ON VOCABULARY FOR THE FOUR PUPIL GROUPS**

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Mean Scores</th>
<th>Total Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>A</td>
<td>17.750</td>
<td>18.557</td>
</tr>
<tr>
<td>B</td>
<td>18.707</td>
<td>19.651</td>
</tr>
<tr>
<td>Total Sex</td>
<td>18.154</td>
<td>19.179</td>
</tr>
</tbody>
</table>
no statistically significant interaction was accepted. It can be concluded on the basis of this finding that the interaction of the two independent variables, pupils' sex and teachers' expectations, did not result in statistically significant different vocabulary scores for the four pupil groups.

Finally, the F-ratio of 206.992 which resulted in the comparison of the effect of intelligence on vocabulary scores was statistically significant at the .01 level of confidence.

**Word-study-skills scores.** The null hypothesis to be tested was that there is no statistically significant difference between word-study-scores of pupils classified according to sex and according to their teachers' expectations concerning the probable success of first-grade boys in learning to read.

Presented in Table XVI are the data resulting from the analysis of covariance for the null hypothesis. The F-ratio of 12.384 for the sex variation in this table shows that there was a significant difference between the mean word-study-skills scores of the boys and of the girls who made up the pupil sample at the .01 level of confidence. Therefore, the null hypothesis of no statistically significant difference between word-study-skills scores of pupils classified according to sex was rejected.
TABLE XVI

ANALYSIS OF VARIANCE OF SCORES ON WORD-STUDY-SKILLS OF PUPILS CLASSIFIED ACCORDING TO SEX AND EXPECTATIONS OF TEACHERS, WITH PUPILS' INTELLIGENCE QUOTIENTS SERVING AS A COVARIABLE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Degrees of Freedom</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1</td>
<td>930.096</td>
<td>930.096</td>
<td>12.384*</td>
</tr>
<tr>
<td>Group</td>
<td>1</td>
<td>263.383</td>
<td>262.383</td>
<td>3.494</td>
</tr>
<tr>
<td>Sex x Group</td>
<td>1</td>
<td>14.323</td>
<td>14.323</td>
<td>0.191</td>
</tr>
<tr>
<td>Intelligence Quotients</td>
<td>1</td>
<td>10514.817</td>
<td>10514.817</td>
<td>140.002*</td>
</tr>
<tr>
<td>Remainder</td>
<td>527</td>
<td>39580.208</td>
<td>75.105</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .01 level of confidence.
An inspection of the total sex means in Table XVII indicates that the girls in both groups achieved significantly higher mean scores on the test of word-study-skills than did the boys in both groups. Therefore, it can be concluded that the effect of sex alone did result in statistically significant word-study-skills scores.

### TABLE XVII

**LEAST SQUARES MEAN SCORES ON WORD-STUDY-SKILLS FOR THE FOUR PUPIL GROUPS**

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Mean Scores</th>
<th>Total Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>A</td>
<td>28.963</td>
<td>30.060</td>
</tr>
<tr>
<td>B</td>
<td>31.294</td>
<td>33.051</td>
</tr>
<tr>
<td>Total Sex</td>
<td>29.511</td>
<td>32.173</td>
</tr>
</tbody>
</table>

The group variation in Table XIV, an F-ratio of 3.494, indicates that there was no statistically significant difference between word-study-skills scores of the Group A pupils and the Group B pupils. These mean word-study-skills scores are given in Table XVII. As a result of these scores, the null hypothesis of no statistically significant difference between mean word-study-skills scores of pupils classified according to their teachers' expectations was accepted. Therefore, it can be concluded that the
effect of teachers' expectations alone did not result in a significantly higher mean word-study-skills score for either of the groups.

An examination of the F-ratio of .191 for the sex by group variation in Table XVI shows that there was no statistically significant difference between mean word-study-skills scores among the groups. Therefore, the null hypothesis of no statistically significant interaction was accepted. It can be concluded on the basis of this finding that the interaction of the two independent variables, pupils' sex and teachers' expectations, did not result in statistically significant different word-study-skills scores for the four pupil groups.

And finally, the F-ratio of 140.002 which resulted in the comparison of the effect of intelligence on word-study-skills scores was statistically significant at the .01 level of confidence.

II. SUMMARY

A null hypothesis with three parts was tested by an analysis of covariance. Each part of the null hypothesis dealt with whether there was statistically significant differences between and/or among groups of pupils in their mean scores on the Stanford Reading Test.

The data presented in this chapter indicated that there was a statistically significant difference between the
250 boys and the 282 girls in their scores on the over-all reading achievement test, the word reading section, the paragraph meaning section, and the word-study-skills section. There was no statistically significant difference found between the 250 boys and the 282 girls in their scores on the vocabulary section of the test.

Statistically significant differences were found in over-all reading achievement scores, word reading scores, and paragraph meaning scores between the 251 Group A pupils and the 281 Group B pupils, but on the vocabulary and word-study-skills test there were no differences found between the two groups.

Finally, no statistically significant differences were found in the mean scores among the 118 Group A boys, the 133 Group A girls, the 132 Group B boys, and the 149 Group B girls on the over-all reading achievement test or on any of its four sections.
CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to determine whether there was a statistically significant difference between reading achievement scores of pupils classified according to sex and as a result of their teachers' expectations concerning the probable success of first-grade boys in learning to read. This chapter presents a summary of the study with a listing of the conclusions reached.

I. SUMMARY

The sample used in this investigation consisted of all first-grade teachers in the East Baton Rouge Parish schools. One hundred and one of the first-grade teachers included in the study returned usable questionnaires. The questionnaires were designed, among other things, to elicit from the teachers a report of their expectations concerning the probable success of first-grade boys versus girls in reading.

Fourteen teachers (Group A) who had high expectations concerning the probable success of first-grade boys in learning to read were matched with fourteen teachers (Group B) who had low expectations concerning the probable
success of first-grade boys in learning to read. All twenty-eight teachers had at least three years of first-grade teaching experience, all were employed in schools located in middle-class neighborhoods, and all had at least a Bachelor's degree.

The pupil sample was equated as nearly as possible on several variables. The pupil variables accounted for were age, reading readiness, socioeconomic level, and intelligence.

The mean reading achievement scores of the 118 boys and the 133 girls whose teachers constituted Group A and 132 boys and the 149 girls whose teachers constituted Group B were obtained from form W of the Stanford Reading Test. An analysis of covariance was the statistical model used to determine whether there was a statistically significant difference in the mean reading achievement scores between and/or among the groups. The pupils' intelligence quotients served as the covariable in the statistical model. Specifically the study was designed to answer the following question: Was there a statistically significant difference between reading achievement scores of pupils classified according to sex and as a result of their teachers' expectations concerning the probable success of first-grade boys in learning to read?

At the conclusion of the study, a statistical analysis of covariance with pupils' intelligence quotients
serving as the covariable was made on (1) over-all reading achievement scores, (2) word reading scores, (3) paragraph meaning scores, (4) vocabulary scores, and (5) word-study-skills scores.

**Over-all reading achievement scores.** The first part of the null hypothesis, that there is no statistically significant difference between over-all reading achievement scores of pupils classified according to sex, was rejected at the .01 level of confidence. See Table VIII for statistical data.

The second part of the null hypothesis, that there is no statistically significant difference between over-all reading achievement scores of pupils classified according to their teachers' expectations concerning the probable success of first-grade boys in learning to read, was rejected at the .01 level of confidence. See Table VIII for statistical data.

The third part of the null hypothesis, that there is no statistically significant interaction between over-all reading achievement scores and pupils, classified both according to their sex and their teachers' expectations was accepted. See Table VIII for statistical data.

**Word reading scores.** The first part of the null hypothesis, that there is no statistically significant difference between word reading scores of pupils classified
according to sex, was rejected at the .05 level of confidence. See Table X for statistical data.

The second part of the null hypothesis, that there is no statistically significant difference between word reading scores of pupils classified according to their teachers' expectations concerning the probable success of first-grade boys in learning to read, was rejected at the .01 level of confidence. See Table X for statistical data.

The third part of the null hypothesis, that there is no statistically significant interaction between word reading scores and pupils, classified both according to their sex and their teachers' expectations, was accepted. See Table X for statistical data.

**Paragraph meaning scores.** The first part of the null hypothesis, that there is no statistically significant difference between paragraph meaning scores of pupils classified according to sex, was rejected at the .01 level of confidence. See Table XII for statistical data.

The second part of the null hypothesis, that there is no statistically significant difference between paragraph meaning scores of pupils classified according to their teachers' expectations concerning the probable success of first-grade boys in learning to read, was rejected at the .05 level of confidence. See Table XII for statistical data.

The third part of the null hypothesis, that there is no statistically significant interaction between paragraph
meaning scores and pupils, classified both according to their sex and their teachers' expectations, was accepted. See Table XII for statistical data.

**Vocabulary scores.** The first part of the null hypothesis, that there is no statistically significant difference between vocabulary scores of pupils classified according to sex, was accepted. See Table XIV for statistical data.

The second part of the null hypothesis, that there is no statistically significant difference between vocabulary scores of pupils classified according to their teachers' expectations concerning the probable success of first-grade boys in learning to read, was accepted. See Table XIV for statistical data.

The third part of the null hypothesis, that there is no statistically significant interaction between word reading scores and pupils, classified both according to their sex and their teachers' expectations, was accepted. See Table XIV for statistical data.

**Word-study-skills scores.** The first part of the hypothesis, that there is no statistically significant difference between word-study-skills scores of pupils classified according to sex, was rejected at the .01 level of confidence. See Table XVI for statistical data.
The second part of the null hypothesis, that there is no statistically significant difference between word-study-skills scores of pupils classified according to their teachers' expectations concerning the probable success of first-grade boys in learning to read, was accepted. See Table XVI for statistical data.

The third part of the null hypothesis, that there is no statistically significant interaction between word-study-skills scores and pupils, classified both according to their sex and their teachers' expectations was accepted. See Table XVI for statistical data.

II. CONCLUSIONS

Based on the analysis of data included in this study, the following conclusions appear to be warranted:

1. Girls had significantly higher scores than boys in over-all reading achievement, word reading, paragraph meaning, and word-study-skills. Vocabulary scores were not found to be statistically significant for the 250 boys and the 282 girls.

2. When grouped according to teachers' expectations, significantly higher scores were made by the 281 Group B pupils in over-all reading achievement, word reading, and paragraph meaning. Vocabulary and word-study-skills scores were not found to be statistically significant.
3. When grouped according to sex and teachers' expectations, no statistically significant differences were found in the scores for the four pupil groups on over-all reading achievement, word reading, paragraph meaning, vocabulary, or word-study-skills. Therefore, the findings relative to the major interest of this investigation indicates that being male or female and being with teachers of high or low expectations for boys versus girls relative to success in learning to read at the first-grade level does not affect significantly the scores on the Stanford Reading Test.
BIBLIOGRAPHY

A. BOOKS


B. PERIODICALS


Buckley, James J. "Who is Pygmalion?" Phi Delta Kappan Journal, II (October, 1968), 124.


Criscuolo, Nicholas. "Sex Influences on Reading," The Reading Teacher, XXI (May, 1968), 762-764.


C. MANUALS


D. UNPUBLISHED MATERIALS


APPENDIX A
Dear First-Grade Teacher:

In cooperation with East Baton Rouge Parish, Southeastern Louisiana College, and Louisiana State University, I am conducting a limited study of teachers opinions regarding certain beginning reading practices and of teacher expectations regarding sex differences in beginning reading.

As a professional person teaching in the first-grade, your opinion is highly valued. You are asked, therefore, to complete the brief questionnaire attached to this letter.

Your individual responses will be kept strictly confidential, being known only by myself. An envelope is provided in which the completed questionnaire is to be returned.

I thank you very much for your cooperation.

Sincerely,

Billy J. Broome
Assistant Professor
APPENDIX B
Have you administered a readiness test?  Yes  No
If yes, was it the Pre-Reading Test of Scholastic Ability
to Determine Reading Readiness for the Harper and Row Basic
Reading Program?  Yes  No  Other (please specify)
QUESTIONNAIRE

1. Name: ______________________________________________________

2. Name of school in which you are teaching: ______________

3. Years of first-grade teaching experience: ________
   (Count 1969-70 as one Year)

4. Do you hold a degree(s)? Yes No
   If yes, is it a Bachelor's__; Master's__; Master's
   plus 30__. Other (please specify)__________________.

5. College(s) attended:_______________________________________

6. Total number of students in your room: __________

7. Total number of boys in your room: _______________

8. Total number of girls in your room: __________________

9. Usual number of reading groups in your class: ________

Directions: Please base your answers to the following
questions on the knowledge you have gained
both from your experience as a teacher and
from your professional training.

10. Which of the following "innovations" do you think holds
    the most promise for use in teaching beginning reading?
    (Please check only one)

    ___ Team Teaching
    ___ Initial Teaching Alphabet (I.T.A.)
    ___ Programmed Instruction
    ___ Linguistics
    ___ Language-Experience Approach
    ___ Other (please specify)__________________________
11. Assume that you could change or add to the content of the stories found in the basal reading series used in your class. Which of the following changes would you first make? (Please check one only.)

____Include more science-related materials.
____Include more social studies-related materials.
____Include more humor.
____Include as major and minor characters people of differing racial and/or socioeconomic groups.
____Other (please specify) ___________________________

12. Assume that first-grade girls, on the average, achieve 80% success in learning how to read. If this assumption is true, what percentage of success do you expect first-grade boys, on the average, to achieve? (Please check only one.)

____100%  _____50%
____90%  _____40%
____80%  _____30%
____70%  _____20%
____60%  _____10%

13. Assume that a group inventory at the end of school revealed between 15% and 65% of the pupils in a typical first-grade class with deficiencies in comprehension, vocabulary, word-recognition skills, and so on. Of this group, what percent do you expect to be boys? (Please check only one.)

____100%  _____50%
____90%  _____40%
____80%  _____30%
____70%  _____20%
____60%  _____10%

14. As a first-grade teacher, how efficient do you think you would be with an all girls class? (Circle one)

Much more efficient 1
Somewhat more efficient 2
Average 3
Somewhat less efficient 4
Much less efficient 5

15. As a first-grade teacher, how efficient do you think you would be with an all boys class? (Circle one)

Much less efficient 1
Somewhat less efficient 2
Average 3
Somewhat more efficient 4
Much more efficient 5
16. For each statement below circle the answer which gives your first reaction. Use the following scale and circle only one number please.

<table>
<thead>
<tr>
<th>Agree Strongly</th>
<th>Agree Somewhat</th>
<th>Neutral</th>
<th>Disagree Somewhat</th>
<th>Disagree Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Reading should be introduced in the kindergarten.  1  2  3  4  5
Readiness testing is a necessary part of first-grade.  1  2  3  4  5
The basal reading series used in my school has too much emphasis on picture and context clues.  1  2  3  4  5
The basal reading series used in my school does not have enough systematic phonics instruction.  1  2  3  4  5
The best workers in my class are girls.  1  2  3  4  5
The statement "He acts like a boy" generally refers to misbehavior.  1  2  3  4  5
At times other than the reading period, you would be more likely to find girls browsing or looking through books than boys.  1  2  3  4  5
Girls enjoy reading more than boys.  1  2  3  4  5
Girls look at books for longer periods of time than boys without feeling tired.  1  2  3  4  5
Boys lose their place, or skip words or lines while reading more often than do girls.  1  2  3  4  5
Girls have better visual imagery for basal reader material than boys.  1  2  3  4  5
Boys have more difficulty in remembering what they read.  1  2  3  4  5
Girls have better manners than boys.  1  2  3  4  5
Boys do not try as hard to succeed in reading as girls.  1  2  3  4  5
Girls are more honest than boys.  1  2  3  4  5
Boys do not stay as neat and clean as girls.  1  2  3  4  5
Girls get along better with other children.  1  2  3  4  5
Boys do not have as much self control as girls. 1 2 3 4 5
Boys are not as responsible as girls in first-grade. 1 2 3 4 5
Girls are more considerate of others. 1 2 3 4 5
Girls are more likely to be good pupils. 1 2 3 4 5
Girls are more interested in how and why things happen. 1 2 3 4 5
Boys are more able to work independently. 1 2 3 4 5
Boys more often cause discipline problems. 1 2 3 4 5
Girls are more stable emotionally in first-grade. 1 2 3 4 5
Boys find the basic sight vocabulary more difficult. 1 2 3 4 5
Girls have a better attitude toward reading than boys. 1 2 3 4 5
The chronological age as a criterion for school admission could be lower for girls than for boys. 1 2 3 4 5
In appraising the personality of first-grade entrants, girls are more emotionally mature than boys. 1 2 3 4 5
The verbal experiences and language background acquired by girls during pre-school years more favorably promote readiness to read than the experience of boys. 1 2 3 4 5
Girls are more advanced physically and verbally than boys and will achieve greater success in beginning reading. 1 2 3 4 5
As a group, girls are undoubtedly predisposed to easier reading success because of their superiorities in physical and verbal characteristics. 1 2 3 4 5
A boy who is able and willing to work hard, despite his slower maturity, has as good a chance of early reading success as a girl. 1 2 3 4 5
It is better, for ease of discipline, to have more girl pupils in a class than boy pupils. 1 2 3 4 5
Most schools would show greater achievement for girls than boys in beginning reading if they would separate boys from girls in the first-grade. 1 2 3 4 5
APPENDIX C
MEMO TO:

FROM: Mrs. Felicia McClure, Supervisor, Elementary Education

SUBJECT: Professional Study by Mr. Billy Broome, L.S.U. Doctoral Student, L.S.U.

In October Dr. Greene asked me to assist Mr. Billy Broome by coordinating his work in some of our first grade classes. At that time you were sent a questionnaire which you completed and returned to him. He appreciates your help very much.

Now, Mr. Broome asks your permission to continue his study. He needs the September readiness test scores of your pupils. Please use the enclosed envelope to mail a list of the test scores to him. If you do not have them listed and must look them up on cumulative folders, please let him know and he will go to your school and do this work. He doesn't want to put you to any trouble.

In May or early April you will be asked to administer a test. Mr. Broome will contact you, bring the test and explain the procedure. You are to mail the test papers to him. He will grade them and return them to you.

I appreciate what you are doing to help in this study. In the end Mr. Broome will share with us his findings which may be quite interesting.

FMcc:slb

Enclosures

cc: Dr. John D. Greene
    Elementary Supervisors
    Elementary Principals

APPROVED:

/S/ E. George Thom
E. George Thom
Coordinator, Elementary Education
VITA

Billy Jean Broome, the son of Mildred Izard Broome and Clyde E. Broome, was born in Hazlehurst, Mississippi, on March 7, 1935.

He began his education in Copiah County, Mississippi. After graduating from Hazlehurst High School, Hazlehurst, Mississippi, he attended Copiah-Lincoln Junior College, Wesson, Mississippi, through his sophomore year of college. The following September he entered the University of Southern Mississippi, where he received a Bachelor of Science degree in 1957, and a Master of Education degree in 1960.

His teaching experience began in Santa Rosa County, Florida. There he taught in the elementary schools from 1957 through 1959. In 1960 he was appointed an Instructor and Reading Specialist in the Department of Education at Southeastern Louisiana College, Hammond, Louisiana.

He served in the Mississippi National Guard and the United States Army Reserve from 1953 to 1959, at which time he was honorably discharged.

He was married to the former Jean Gayle Narro of Bay Springs, Mississippi in August, 1957. They have one son, David Van, born March 28, 1963.
He is presently on leave from Southeastern Louisiana College where he holds the rank of Assistant Professor of Special Education and serves four Florida Parishes as Reading Specialist and Educational Consultant.
Candidate: Billy Jean Broome

Major Field: Education

Title of Thesis: An Investigation of the Effects of Teachers' Expectations on the Achievement in Reading of First-Grade Boys

Approved:

[Signatures of Major Professor and Chairman, Dean of the Graduate School, and EXAMINING COMMITTEE members]

Date of Examination: June 18, 1970