The effects of a pre-first grade transition year on student academic achievement
by Leni Cramer Hassell

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University

Abstract:
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Analysis of the results indicated no significant interaction between the independent variables, gender and group assignment, on either reading or mathematics achievement. Chronological age and gender did not account for a significant portion of the variability in either the reading or mathematics achievement scores at the end of grade one. The mean reading and mathematics scores of the pre-first grade students were significantly higher than the mean test scores for either the retained students or the "at risk" promoted students. It appears that a pre-first grade placement can be effective in improving the reading and mathematics achievement of certain students.

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by

Leni Cramer Hassell

A thesis submitted in partial fulfillment
of the requirements for the degree

of

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APPROVAL

of a thesis submitted by

Leni Cramer Hassell

This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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VITA

Leni Cramer Hassell was born in Mont Clair, New Jersey in 1946. She attended the University of Florida in Gainesville from 1964 to 1966 and received an Associate of Arts degree in Physical Education. She attended the University of South Florida in Tampa from 1967 to 1968, and from 1970 to 1972 and received a Bachelor's degree in Elementary Education and a Master's degree in Reading Education. She has taught elementary school in the Hillsborough County School System in Tampa, Florida and has worked as a classroom teacher, a reading specialist, and a primary specialist in the Broward County School District in Fort Lauderdale, Florida. She was an educational diagnostician and a team leader for the Early Childhood Department of Broward County, Florida where she worked closely with the implementation of a district-wide pre-first grade program. Prior to attending Montana State University in Bozeman, Montana from 1986 to 1988, she worked as Assistant Principal at Westchester Elementary School in Coral Springs, Florida. She has two children, Marc Clayton Hassell and Meagan Claire Hassell.

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ABSTRACT

The problem of this study was to determine if there was a significant difference in the level of academic achievement upon completion of grade one, among students who were designated as being "at risk" for promotion to the first grade, when these "at risk" students were either retained in kindergarten, promoted to the first grade, or promoted to a transition pre-first grade program.

This study was conducted from September 1987 to April 1988 in six elementary schools from two school districts in Montana. The effects of three independent variables on the reading and mathematics achievement scores of first grade students were studied: student group assignment, gender, and chronological age. Achievement was measured by either the Metropolitan Achievement Test, Primary Level, Form L, or the Iowa Tests of Basic Skills, Form 7, administered during the second semester of the students' first year in grade one. Surveys were completed by both parents and teachers and a sociometric questionnaire was administered to selected classrooms.

Analysis of the results indicated no significant interaction between the independent variables, gender and group assignment, on either reading or mathematics achievement. Chronological age and gender did not account for a significant portion of the variability in either the reading or mathematics achievement scores at the end of grade one. The mean reading and mathematics scores of the pre-first grade students were significantly higher than the mean test scores for either the retained students or the "at risk" promoted students. It appears that a pre-first grade placement can be effective in improving the reading and mathematics achievement of certain students.

CHAPTER 1

INTRODUCTION

Introduction

Grade retention, or the nonpromotion of students from one grade to another, has been the source of considerable educational debate since the early 1900's (Jackson, 1975). The validity of policies for the retention of students who are low achieving or socially immature has been, and continues to be, a topic of great concern to educators (Caswell, 1933; Goodlad, 1954; Chansky, 1964; Scott and Ames, 1969). The rate of student retention has fluctuated over the years depending upon the prevailing philosophy (Rose et al., 1983). Today, with the increasing emphasis on competency-based education, school districts around the country continue to conduct research to determine the effects of their promotion/retention policies (Baenen and Holly, 1982; Beckmann, 1985; Biegler and Gillis, 1985; Peterson, 1985). Although the findings of past and recent studies concerning social promotion versus grade retention are inconclusive (Jackson, 1975; Rose et al., 1983; Holmes and Matthews, 1984), the rate of nonpromotion in our schools is on the increase (Hubbell, 1981).

Statement of the Problem

The problem of this study was to determine if there was a significant difference in the level of academic achievement assessed upon completion of grade one, among students who were designated as being "at risk" for promotion to the first grade, when these "at risk" students were either retained in kindergarten, promoted to the first grade, or promoted to a transition pre-first grade program.

Need for the Study

Jackson (1975), after conducting a critical review of 44 promotion/retention studies published between January 1929 and June 1973, stated, "The best justified conclusion that can be drawn from the forty-four reviewed studies is the need for further research of a much higher quality than that conducted in the past" (p. 625). He noted the research was generally of poor quality with inconclusive results. Jackson also maintained that the studies of student grade retention never clearly defined how the repetition of a grade is supposed to reduce students' difficulties since there was seldom any special help provided these students. They were simply put through the same course of study for a second time regardless of whether the material was appropriate to their needs or of any interest to them.

Holmes and Matthews (1984) conducted a review of promotion/retention studies published between 1929 and 1981 to examine the effects of nonpromotion on elementary and junior high school students. They concluded:

> Those who continue to retain pupils at grade level do so despite cumulative research evidence that the potential for negative effects consistently outweighs positive outcomes (p. 232).

Reiter (1973), after reviewing the promotion/retention research for the Philadelphia School District, commented, ". . . how the pupil is promoted or retained is more important than whether he is" (p. 20). In a similar vein, Chansky (1964) alluded to this same concern after studying the effects of promotion/nonpromotion on first grade students. He concluded:

> It appears to the writer that the question to be considered might not be whether a child should be promoted or retained, but rather with which teacher should a child be placed in order to do him the most good. Grade placement might make only slight difference. The teacher-pupil interaction is a variable which requires further exploration (p. 235).

Both Chansky (1964) and Reiter (1973) are suggesting that perhaps the type of curriculum which is provided for the "at risk" student during the succeeding year of school may be of more significance in fostering the student's academic growth than the grade level to which the student is assigned.

As school districts continue to reassess their promotion/retention policies given the inconsistent and inconclusive research findings, it seems appropriate to ask the question: What is the best curriculum decision for those students who do not meet the grade level standards for promotion? Two studies, one by Chase (1968) and another by Scott and Ames (1969), cited the positive benefits of first grade retention when the decision to retain was due to the social and emotional immaturity of the student. The benefits cited were improved student grades, improved student satisfaction with school, and improved teacher and parental satisfaction with the students' school work.

Baenen and Holly (1982) studied the effects of a district-wide promotion/retention policy and discovered that students who were retained at the first grade level were the only ones to benefit academically from retention. Teachers who were interviewed as a part of this school district study indicated that gains in student achievement were more likely when:

> . . . the source of the retainees' learning problems can be identified, a systematic plan is developed to deal with the problem areas, and teachers maintain a positive, interested attitude and are willing to do whatever is necessary to help retainees (p. 1).

An analysis of the research findings relative to grade retention indicates that the mere repetition of a grade

does not result in improved student academic achievement. The research also provides evidence which indicates students in the primary grades, who are provided with a curriculum designed to meet their needs, do show significant academic achievement. If one accepts these conclusions, then what other curricular alternatives are there available to school districts to positively support the "at risk" students' academic growth? Would a transition grade curriculum designed to meet the individual developmental needs of these "at risk" students provide a viable alternative to grade retention?

A study by Kilby (1984) addressed the question of whether a year in a pre-first grade transition class following the kindergarten year, where curriculum adjustments are made to meet the needs of the student, produces greater academic achievement than the repetition of the kindergarten program or promotion to the next grade level. The findings from Kilby's study indicated the junior first grade program had a positive impact on student academic achievement. Kilby concluded there were three aspects which were involved in the prevention of failure in the elementary school:

> . . . the identification of students who may be at risk of future academic difficulties, the development of early intervention programming for students who are identified, and the evaluation of program impact, both positive and negative (p. 31).

A school district survey of primary grade programs by Mayfield (1980) indicated teachers are concerned that the transition from kindergarten to first grade is difficult for some students. One recommendation from this study was to establish transition classes for those students who were unprepared for promotion from kindergarten to first grade.

The evidence from these studies suggests there is a need to determine if a year in a pre-first grade transition program is actually a viable alternative to retention in kindergarten or social promotion to the first grade. If school districts wish to consider a transition program to meet the needs of students who are considered to be "developmentally immature" for the first grade curriculum, then more data should be provided to determine the efficacy of such a program.

The significance of this information is most relevant for school districts who are concerned with grade level placement decisions for primary grade students. The amount of time and money expended toward the development of a program such as a pre-first grade, and the effects of such placement decisions on the lives of students and their parents must be justified by research data which support the efficacy of such decisions.

Questions to Be Investigated

This study attempted to answer the following questions about the effects of a transitional pre-first grade year on the academic achievement of "at risk" kindergarten students as compared to the effects of promotion or retention:

(1) Is there a significant difference in the reading achievement, when assessed at the end of grade one, among "at risk" kindergarten students who were either retained in kindergarten, promoted to the first grade, or promoted to a pre-first grade transition program?

(2) Is there a significant difference in the mathematics achievement, when assessed at the end of grade one, among "at risk" kindergarten students who were either retained in kindergarten, promoted to the first grade, or promoted to a pre-first grade transition program?

(3) Is there a significant difference between the reading achievement of males and females?

(4) Is there a significant difference between the mathematics achievement of males and females?

(5) How much of the variability in the reading achievement among the groups under investigation can be accounted for by chronological age and gender?

(6) How much of the variability in the mathematics achievement among the groups under investigation can be accounted for by chronological age and gender?

(7) What is the percent of agreement to the eight statements on the Parent Questionnaire among the parents of the groups under investigation?

(8) What is the percent of agreement to the eight statements on the Teacher Questionnaire among the teachers of the groups under investigation?

(9) Are students from one group under investigation chosen more often on a sociometric questionnaire than students from another group?

General Procedures

This study was conducted in two school districts in Montana. Permission to conduct the study was obtained from the superintendent and the elementary school principals within each district, in accordance with board policy. The researcher traveled to each of the school districts to conduct the research. The combined K-12 student population of the two districts under investigation was approximately 6,000 students.

Students who were designated as being "at risk" for promotion to the first grade at the end of the 1983-84, 1984-85, and 1985-86 kindergarten school years in six elementary schools within these two Northern Rocky Mountain communities comprised the sample of this study.

The students were assigned, according to each school's policies concerning grade placement, to one of three grade

level placements: retention in kindergarten, placement in a pre-first grade transition program, or promotion to first grade. These assignments were based on the results of the Bracken Basic Concept Scale in District 1 or The Gesell School Readiness Test in District 2. Teacher judgment and parental consent to the placement recommendation were also utilized as criteria for the placement recommendations by both districts.

A comparison group of students was selected from the kindergarten population of the two districts at the end of the same three school years to determine if there was a significant difference in the first grade achievement of the "at risk" students as compared with students who were designated as being not at risk for promotion and therefore eligible for promotion to the first grade immediately after their kindergarten year.

The reading and mathematics achievement of each group was analyzed at the end of each group's first year in grade one, to determine if there was a significant difference in the students' academic achievement attributable to the grade placement. Achievement was measured by either the Metropolitan Achievement Test, Primary Level, Form L, in District 1 or the Iowa Tests of Basic Skills, Form 7, in District 2, which were administered by the districts during the second semester of each school year.

Surveys were completed by the parents of the students of the four groups under investigation to determine the percent of agreement to the eight statements on the Parent Questionnaire (Appendix B). Similarly, surveys were completed by the teachers for each of the students in the four groups under investigation to determine the percent of agreement to the eight statements on the Teacher Questionnaire (Appendix A). Finally, a Sociometric Questionnaire was administered to the students in seven classrooms (five first grade and two second grade) whose group membership consisted of students from the groups under investigation to determine if one group of students was chosen more often on the four survey questions than any other group (Appendix C).

The data were analyzed using two-way analysis of variance to determine: (1) if there was significant interaction between the independent variables, group assignment and gender, on the reading and mathematics achievement of the students in the four groups; (2) if there was a significant difference in the reading and mathematics achievement of males and females; and (3) if there was a significant difference in the reading and mathematics achievement among the four groups under investigation at the end of the first grade. The Tukey Studentized Range Test (Kerlinger, 1965; Ferguson, 1981) was utilized as a planned multiple comparison technique to

determine between which groups the significant differences occurred. The data were also analyzed using multiple regression to determine if a significant portion of the variability among the four groups could be accounted for by the independent variables, gender and chronological age.

Limitations of the Study

(1) This study was conducted in two rural Northern Rocky Mountain communities and the sample of students to be studied was drawn from the kindergarten student population of six elementary schools. The results therefore may only be generalizable to a comparable student population.

(2) The placement criteria utilized by each district in order to assign the students to one of the four groups under study were determined prior to the investigation.

Definition of Terms

The terms listed below were used throughout the investigation and are defined as follows.

(1) Academic achievement: A measure of a student's academic ability determined by data obtained from the Metropolitan Achievement Test or the Iowa Tests of Basic Skills. For this study, percentile scores from these tests were utilized in the analysis of the data.

(2) At risk student: A term applied to those students who may have difficulty academically and/or socially-emotionally if promoted to the next grade level. In this study, kindergarten students were determined to be "at risk" for promotion to the first grade based on the results of either The Gesell School Readiness Test utilized by District 2 or the Bracken Basic Concept Scale utilized by District 1. Teacher judgment concerning the students' academic skills and social-emotional maturity was also utilized by both districts in the determination of students considered to be "at risk."

(3) Developmentally appropriate curriculum: A curriculum designed to meet the individual developmental needs of students. At the pre-first grade level a developmentally appropriate curriculum is one which provides students with concrete, hands-on, manipulative experiences. The curriculum is designed to determine the developmental and academic readiness of students and to provide them with experiences which will foster their academic, psycho-motor, and social-emotional growth.

(4) Grade retention: The practice of requiring a student who has been in a given grade level for a full school year to remain at that level for a subsequent school

year (Jackson, 1975). This is also referred to as nonpromotion and grade repetition.

(5) Pre-first grade transition class: A classroom experience designed to provide a curriculum appropriate to the developmental and academic needs of students who have completed kindergarten but who are lacking the academic skills and/or social-emotional maturity necessary for promotion to the first grade level. This is also referred to as junior first grade.

(6) Sociometric testing: Questioning, either individually or in a group, to determine the social relationships of students within the classroom setting.

> The practice of sociometry consists of the administration of a questionnaire in which the subject chooses five other people in rank order of their attractiveness as associates, either generally or in relation to some specific activity (Moreno, 1937).

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The problem of this study was to determine if there was a significant difference in the level of academic achievement assessed upon completion of grade one, among kindergarten students designated as being "at risk" for promotion to the first grade, when these "at risk" students were either retained in kindergarten, promoted to the first grade, or promoted to a transition pre-first grade program. This chapter contains a review of the literature which is pertinent to the study. The chapter has been organized into the following five sections: (1) literature supporting grade retention, (2) literature opposing grade retention, (3) literature supporting pre-first grade programs, (4) literature opposing pre-first grade programs, and (5) discussion of the research.

Literature Supporting Grade Retention

Grade retention, or the nonpromotion of students, is practiced widely throughout the United States and involves a large number of students each year. "Grade retention is

the practice of requiring a student who has been in a given grade level for a full school year to remain at that level for a subsequent school year" (Jackson, 1975, p. 613). According to Jackson, grade retention has a long history in American education and it was the focus of at least five studies published before 1930.

One early study favoring the nonpromotion of students was conducted by Frances (1939). Frances studied the effects of grade retention on the academic achievement and emotional satisfaction of 60 children who had been retained within a four year period in the Linden Avenue School in Glen Ridge, New Jersey. Frances stated, "According to this study, successful accomplishment for at least 4 years, was the experience of 87 percent of the children who were allowed the privilege of extra time" (p. 188).

Two questions began to develop from the early promotion/retention studies: (1) What type of child would benefit from grade retention? and (2) What criteria should be used to determine whether a child should be retained? One study that attempted to answer these questions was conducted by Lobdell (1954). He disagreed with Goodlad's (1952) contention that the social promotion of students was preferable to nonpromotion. Lobdell studied the academic progress of 94 students in the Union Free School District, Valley Stream, New York, during and after their repeated year. He concluded from his study that:

> Careful selection of the children who are to repeat a grade, guided by definite criteria painstakingly applied in each case, can help bring about success, during and after the year of repeating, for a larger percentage of children than previously available data might lead one to expect (p. 337).

Lobdell also asserted that:

> When definite immaturity is evidenced, the indication is that the child will perhaps be better off, personally as well as academically, if he repeats his present grade (p. 335).

Another study which supports the contention that socially/emotionally immature students profit from grade retention was the research done by Chase (1968). He studied students from 10 schools in Columbus, Ohio, that were representative of a cross-section of the schools within the Columbus school system. The subjects chosen for the study were students whose teachers indicated they were "basically normal but immature for the grade" as the first or second major reason for retention (p. 170). Children with low intelligence, emotional disturbances, perceptual dysfunction or brain damage, specific academic problems, or inadequate attendance were omitted from the study. Sixty-five children were chosen at the beginning of the school year for the study. The success of retention was determined by the teachers and parents of those children.

According to Chase (1967),

> Results showed that this group of immature children, i.e., those who were retained in the first grade, were, after repeating the

> grade, in a far better position to compete with their classmates than were those who had been moved ahead to the second and third grades before being allowed to repeat (p. 176).

Chase concluded that:

> . . . repeating a grade will engender no negative social or emotional effects in the child whose school failure is based primarily on his immaturity for the grade in which he has been placed (p. 177).

Scott and Ames (1969) agreed with Lobdell's (1954) and Chase's (1967) conclusions. It was their opinion that many students are retained because they have not mastered the academic subjects at their current grade level or because educators believe they are emotionally and/or socially immature for their age. The study by Scott and Ames centered on only those students who were retained for social/emotional immaturity. Subjects of the study were 27 elementary school children from Chesire, Connecticut. Five students were retained in kindergarten, 14 in first grade, three in second grade, one in fifth grade, and one in sixth grade. According to the authors,

> Academic performance, as measured by grades received, improved to a statistically significant degree for every one of the 27 children who had to repeat a grade because of immaturity alone (p. 438).

Teachers and parents reported improved behavior during the year of grade repetition.

Reinherz and Griffin (1970) studied 57 boys of normal intelligence who were repeating grades one through three

for the first time. They found that boys who were characterized as being "immature" made greater academic gains in the retained year than the students who were retained for reasons other than immaturity. Over 80 percent of the first graders made satisfactory achievement. Less than one-half of the second and third graders made equivalent progress. Students who were considered to have good to excellent peer relationships and social-emotional adjustment made the most significant progress. Reinherz and Griffin concluded that retention is most successful for normal but immature students in the early grades.

Stringer (1960) studied the effect of retention on the academic achievement of 50 students in the Bayless School District, St. Louis County, Missouri. Favorable results for grade retention resulted from her study. The Stringer study also attempted to determine the type of student who would profit the most from another year in the same grade. She found that if the students themselves perceived the need for retention, that is, they saw another year as being a positive experience, then they responded by producing a greater effort throughout the retained year. Parental support also appeared to be an important factor in the academic success of socially promoted or nonpromoted students. Stringer concluded:

> In our study parents seem to be the key people. If they are willing and able to work with the school to help the child, social

> promotions can produce excellent results. Where the parents are not willing or able to work with the school, retentions can help a significant proportion of failing children if two criteria are used in selecting pupils for retention: first, a pre-retention rate of progress that is less than half of normal and, second, a lag amounting to between 1.0 and 1.9 grades, except at grades 1 and 2, where lags of more than .3 and .7 grades, respectively, have been used. The child's rate of progress before retention seems particularly important because it recognizes the child's own growth, regardless of his rank in class. In this way it provides the kind of individualization that children need, within the framework of a firm school policy, which they also need (p. 375).

Another attempt to determine the educational merit of nonpromotion was conducted by Chansky (1964). Chansky's study, although agreeing generally that grade retention might be a solution to students' academic problems, introduced the question: Would students do just as well academically if promoted, when the pupil-teacher interaction was positive and the child's individual needs were taken into consideration, than they would if retained? Chansky studied first graders from four school districts in Ulster County, New York. Sixty-three students were low achievers. Thirty children were promoted to grade two and 33 were retained in grade one. The retained group contained 26 boys and seven girls, while the promoted group was comprised of 23 boys and 7 girls. Pre- and post-tests of intelligence, personality, and achievement were administered to the students. In contrast to the retained

group, the promoted group was more able mentally and more skilled in reading vocabulary, comprehension, arithmetic reasoning, and fundamentals. Personality test scores for both groups showed no differences in adjustment between the promoted and retained children. According to Chansky (1964):

> The additional year in grade one provided the retained children with an opportunity to function at a level consistent with their mental ability. The promoted group is still more advanced than the retained group. This finding raises a question of which is of greater importance--having a child achieve satisfactorily relative to mental age expectancy, or having a child achieve satisfactorily relative to the achievements of the children in his class (p. 230).

Chansky (1964) observed that the promoted group made significantly greater gains in reading vocabulary and comprehension, but found no differences noted in arithmetic achievement. The promoted group showed no greater progress in personality attributes than the retained group.

> It appears to the writer that the question to be considered might not be whether a child should be promoted or retained but rather with which teacher should a child be placed in order to do him the most good. Grade placement might make only slight difference. The teacher-pupil interaction is a variable which requires further exploration (p. 235).

In an attempt to determine the emotional effects of grade retention, Finlayson (1975) studied the effect of nonpromotion on the self-concept of first grade students from Montgomery County, Pennsylvania. A self-concept scale

was administered two different times during the school year to 25 nonpromoted pupils, 25 randomly selected promoted pupils, and 25 pupils whose achievement was considered borderline. Parent and teacher questionnaires were also utilized in the study. Finlayson concluded that nonpromotion had no negative effect on the self-concept of first grade students. The self-concepts of the nonpromoted first grade students continued to increase during the repeated school year, while the self-concepts of the borderline students and the promoted groups tended to decrease. The results of Finlayson's research did not support the previous findings by White and Howard (1973) who maintained that students' self-concepts decreased when they failed to be promoted in school.

McAfee (1981) studied the effects of grade retention over a two year period (1977-78 and 1978-79) on the academic achievement of students in the school district of Indian River County, California. The implementation of a student promotion policy at the beginning of the 1977-78 school year resulted in a 26 percent rate of retention of students grades one through nine. The two year analysis of test results indicated retention appeared to have a beneficial effect on the achievement of students in the elementary grades, but no significant difference was observed for middle-secondary grade students.

A further study of interest, and one that may have some possible implications relative to the viability of transition grade programs, was the First Grade Promotional Practices Study conducted by Sandoval and Hughes (1981). This study questioned the wisdom of retaining every student who does not meet the standards for promotion at each grade level and it again raised the question: What type of child benefits from grade retention? The purpose of this study "was to learn which children are naturally selected by the system to repeat the first grade" (p. 457). Six school districts from the Sacramento-Solana County area of Northern California, including the Catholic School Department, and 146 first grade students who were considered for retention participated in the study. Of the participating children, 84 (57.5 percent) were retained and 63 (42.5 percent) were promoted. The retention decision was contingent upon three factors: the opinion of the classroom teacher, the discretion of the school principal, and, in the majority of cases, parental consent. (In most cases students were not retained if the parents were strongly opposed.) Sixty percent of the subjects were boys and 25 percent were Black or Hispanic. The researchers believed the students to be representative of the first grade population in California. Sandoval and Hughes (1981) concluded:

> The children retained appear to have been so on the basis of academic incompetence, low cognitive development, and low visual-motor skills; they were no different from peers with respect to size, self-concept, IQ, social skills, or age. Whether they should have been retained for various reasons is another question. The important point is that those retained are not homogeneous. Some retained children were very low functioning in a number of areas. Should they have gotten special education instead of having the intervention of repeating the year? One group was fairly high functioning as indicated by test scores. I do know that these children had the best prognosis and were performing higher in school one year later than other children retained. But one must ask, should they have been promoted rather than retained? A lot of children do not fit a mold. Nonpromotion is a crude intervention. We need to know more about children and their curriculum before we will be able to match aspects of children with aspects of the intervention to make this a valuable experience for children (p. 462).

Literature Opposing Grade Retention

As early as 1911, Keyes conducted a longitudinal study to determine the effects of grade retention on the academic achievement of students. He concluded that after a year of retention, 20 percent of the students studied improved their academic performance, 39 percent demonstrated no change, and 40 percent not only failed to improve their performance but actually did worse (Bocks, 1977).

A study by Caswell (1933) dealt with the incidence of grade retention in seven states across the nation. Caswell surveyed these states and cities from 1928 through 1931.

The total school enrollment in the seven states was over two and one-quarter million children. Caswell found that the rate of retention of children in the elementary schools within the same system often varied as much as 30 percent. A larger number of males were retained than females and a greater amount of nonpromotion occurred at the first grade level. Mollinson (1954) summarized Caswell's conclusions with the following statement:

> Nonpromotion is not likely to assure mastery of subject matter, it does not reduce the range of abilities present in a class, it produces more disciplinary problems and tends to intensify emotional instability. Moreover, . . . low mentality, insufficient attendance, imperfect health, or lack of emotional stability are not valid reasons for nonpromotion, for the latter in no way remedies the cause of failure. Nonpromotion tends to kill incentive to learn, resulting in decreased achievement, while having undesirable effects on personality (p. 155).

Another early study was conducted by Arthur (1936). He examined the academic progress of 60 students (19 girls, 41 boys) who were repeating the first grade. The students were grouped according to their intelligence quotient. It was concluded that "the average repeater of the group studied learned no more in two years than did the average non-repeater of the same mental age in one year" (p. 205).

Coffield and Blommers (1954) studied the effects of grade retention on the academic achievement of 190 students from 302 Iowa school systems. They discovered that failed pupils gained approximately only six months in educational

progress during the repeated year and still failed to achieve the norm for their grade level during the year following failure. The educational progress of failed pupils was also only four to six months less than that of matching promoted pupils. Coffield and Blommers (1954) concluded from their research that slow learning students who repeat a grade and slow learning children who are promoted:

> . . . ultimately perform at about the same level when this performance is measured in the same higher grade, in spite of the fact that the failed pupils have each spent an added year in attaining this higher grade (p. 249).

Goodlad (1954) continued his research into the efficacy of grade retention to determine whether or not differences in social and personal adjustment existed between two groups of promoted and nonpromoted students. Goodlad's study was designed to contribute to the existing research of Sandin (1944), "by comparing the social and personal adjustment of equated groups of children subsequent to promotion and nonpromotion" (p. 303). Sandin studied the social and personal adjustment of promoted and nonpromoted students. He found that nonpromoted children

> . . . tended to choose companions from grades higher than their own, to be pointed out by classmates as children who associated with older pupils, and to be discriminated against in the selection of study companions (Goodlad, 1954, p. 302).

Sandin's findings concerning attitudes and feelings disclosed a general outlook indicative of a less-than-happy adjustment among slow progress than among normal progress pupils. Goodlad maintained:

> Since Sandin made no attempt to equate the groups studied on other factors, likely to affect social and personal adjustment, it is impossible to weigh the contributing influence of the promotion factor (p. 302).

Sandin, at the conclusion of his study, believed:

> It is necessary to conduct further study to discover to what extent children who might have been nonpromoted according to grade standards, but who actually were promoted, show a better picture of adjustment than those who were held back (Goodlad, 1954, p. 302).

Goodlad, at the conclusion of his study, found that promoted students reported significantly less peer rejection than did the nonpromoted students. Goodlad also noticed a decline in social attitudes for nonpromoted students, while promoted students appeared to improve in their social attitudes.

In a further attempt to determine the social and emotional effects of grade retention, Morrison and Perry (1956) studied the effects of age on the sociometric status of 177 fifth and sixth grade students who were overage for their grade level because they had been retained at some point in their elementary years. They found the overage students were not well accepted by their peers in the class groups studied.

Hall and Demarest (1958) studied the effects of a promotion policy on the reading achievement of elementary school students in Phoenix School District 1. In 1948, Phoenix School District 1 "changed from a grade standard policy to a combination of the continuous promotion and continuous progress policies" (p. 204). Under the new policy, children were promoted on the basis of their total adjustment rather than academic achievement alone. After studying the achievement and ability record of students in grades four and six throughout a ten year period, Hall and Demarest concluded that "regular promotion of students, that is, keeping them with their own age group, does not result in a lowering of academic achievement" (p. 207).

In a further attempt to determine the effects of grade retention at the primary level, Dobbs and Neville (1967) conducted a study of eight elementary schools with an overall high first grade retention rate. Thirty pairs of children, each pair consisting of a once retained first grader and a never retained second grader, were matched on the following variables: race, gender, socioeconomic level, type of classroom assignment, age, mental ability, and reading achievement. During the first and second years of the study the reading and arithmetic achievement gains of the promoted group were significantly greater than the nonpromoted group. The authors concluded:

> Neither group of children used in the present study was academically ready for their present grade placement. Although the promoted group gained significantly more each year in both reading and arithmetic achievement than did the nonpromoted group, it is to be remembered that the grade placement of the promoted group was one level higher than the nonpromoted group. Low achievers, therefore, experience failure through retention or through continued promotion unless classroom activities are adjusted to the ability level of the individual child (Dobbs and Neville, 1967, p. 474).

A study by Baenen and Holly (1982) is an example of more recent research conducted by individual school systems to study the effects of an individual district's promotion/retention policy. They studied the results of a new and more specific promotion/retention policy adopted by the Austin, Texas Independent School District. Students who were at least one year behind in their reading levels at grades one through six and/or one year behind in mathematics competencies at grades four through six were to be considered for retention. Retainees gained an average of .8 of a grade equivalent year in reading on the results of the Iowa Test of Basic Skills. Some students gained up to 3.2 grade equivalent years in reading and 2.7 years in math. One unanswered question is: What type of child made very small gains if the average gain was .8? Did these children, then, profit from the retained year? Teachers who were interviewed indicated that gains were more likely when:

> . . . the source of the retainees' learning problems can be identified, a systematic plan is developed to deal with the problem areas, and teachers maintain a positive, interested attitude and are willing to do whatever is necessary to help retainees (Baenen and Holly, 1982, p. 1).

The retained students tended to gain less in math and reading achievement than a group of students with similar characteristics who were not retained. In every grade level but first grade, students who were retained still performed below average for that grade level. The study also concluded that Mexican American and Black students were retained more often than Anglo, Asian, and American Indian students. Boys were retained twice as often as girls at the elementary level.

May and Welch (1984) studied the results of retaining children prior to second grade on the basis of their "developmental maturity," assessed by The Gesell School Readiness Test. The study population consisted of 223 students. According to the authors, these students represented:

> . . . all the children from grades two through six who were enrolled in a suburban homogeneous white middle class school district's elementary school from the time of their Gesell kindergarten screening to the time of data collection for this study (p. 382).

The students were divided into three groups for the purpose of this study. One group of students was coded "over-placed" because their parents would not allow them to have

an extra year to mature. Another group of students was coded "traditional" since they were considered to be developmentally mature and were promoted to the next grade. The third group was coded "buy a year" since they were retained in a grade prior to the second grade. An examination of the results of the Stanford Achievement Test indicated that in spite of being chronologically older, the "buy a year" group did not do as well as either of the other two groups. Since the "buy a year" group was not assigned to a pre-first grade transition program, but were retained at the same grade level, there is no way of knowing whether an alternative curriculum would have made a difference in their academic performance.

Jackson (1975) reviewed 44 retention studies published between January 1929 and June 1973. According to Jackson, "The best justified conclusion that can be drawn from the 44 reviewed studies is the need for further research of a much higher quality than that conducted in the past" (p. 625). Jackson continued:

> One general conclusion about the effects of grade retention relative to grade promotion is clearly warranted by all the results taken as a whole: There is no reliable body of evidence to indicate that grade retention is more beneficial than grade promotion for students with serious academic or adjustment difficulties. Thus, educators who retain pupils in a grade do so without valid research evidence to indicate that such treatment will provide greater benefits to students with academic or adjustment

> difficulties than will promotion to the next grade (p. 627).

Jackson (1975) noted these studies never clearly defined how the repetition of a grade is supposed to reduce students' difficulties, since seldom was there any special help provided to these students. They were simply put through the same course of study for a second time, regardless of whether the material was appropriate to their needs or of any interest to them.

Two studies conducted in 1984 also analyzed the previous research concerning the effects of promotion versus nonpromotion. One study was conducted by Holmes and Matthews (1984), who researched the effects (academic achievement, personal adjustment, self-concept, and attitude toward school) of grade retention versus promotion from 44 previous studies. The studies involved 11,132 pupils in school districts throughout the United States. Holmes and Matthews concluded:

> Those who continue to retain pupils at grade level do so despite cumulative research evidence showing that the potential for negative effects consistently outweighs positive outcomes. Because this cumulative research evidence consistently points to negative effects of nonpromotion, the burden of proof legitimately falls on proponents of retention plans to show there is compelling logic indicating success of their plans when so many others have failed (p. 232).

The second study, by Rose et al. (1984), summarized the results from 25 previous studies on the effects of retention on school achievement. They concluded:

> Taken as a whole, the experimental data collected over the past 70 years fails to indicate any significant benefits of grade retention for the majority of students with academic or adjustment problems. In addition, there have been no attempts to distinguish those children likely to acquire a greater amount of academic information from those children likely to acquire the same amount or less information in the repeated year relative to the first year in a grade (p. 206).

Niklason (1984) completed a comprehensive review of the research literature concerning the promotion/retention controversy over the past 16 years. She concluded that the practice of retaining students has gained in popularity and that there are great discrepancies between these educators' beliefs and the confirmable evidence regarding retention. Niklason examined the results of the retention practices in two Utah school districts and compared the children recommended for retention with a control group of students. These two groups were found to be "significantly different in their intellectual ability, academic achievement, and adjustment characteristics" (p. 494). To measure the effects of nonpromotion, the retained students' growth was compared to the growth of academically similar functioning students who were recommended for retention but who were promoted. The students recommended for retention were retested one year after the retention decision was made.

Retention was not found to benefit the children academically or in personal or social adjustment.

Another recent study of a district promotion/retention policy was undertaken by Beckmann (1985). This study included 439 students retained in the Kirkwood School District of Washington (state) from 1979 to 1984. Beckmann determined that 53 percent of students retained were retained in kindergarten or first grade. Students born in July, August, or September had a significantly higher retention rate. Students who repeated lower grades tended to have higher grade point averages in high school than students who were retained at higher grade levels. Sixty-two percent of retained students were male, 44 percent came from single parent homes, 52 percent were Black, 52 percent had behavior problems, and 69 percent received support services. The authors felt these statistics might reflect the national profile of retained students.

A further attempt to examine district policy was the research by Peterson et al. (1985) who studied the long-term effect of retention/promotion decisions on the academic achievement of primary grade students in the Mesa Public Schools. First, second, and third grade students who were retained at the end of the 1980-81 school year were identified and a matched comparison of non-retainees was selected. Students were matched on the following variables: sex, ethnicity, chronological age, and reading,

grammar and math achievement scores. The relative standing of retained students was compared with their matched counterparts for the same year (i.e., first grade retainees were matched with second grade non-retainees). Performance of retainees was compared with that of their matched counterparts at the same grade level from the previous year (i.e., first grade retainees' scores from 1982 were matched with non-retainees' first grade scores from 1981). Results of the study indicated retained students significantly improved their class standing by the end of the retained year. In some cases these gains were maintained over a two year period. However, by the end of the third year there was no significant difference in achievement between the retained and promoted students.

Literature Supporting Pre-First Grade Programs

School districts continue to struggle with the dilemma of appropriate curricular placement for kindergarten students who are perceived to be unprepared for the district's first grade curriculum. Mayfield (1983) conducted a study initiated by the Commission on Education for the Board of School Trustees of the Greater Victoria District, Alberta, Canada, to investigate the orientation of all kindergarten children to school and their subsequent transition from kindergarten to grade one and the later

transition from grade three to grade four as perceived by teachers, administrators, and parents. Interviews of the school district personnel were used to obtain the specific information. The information concerning the educators' perceptions of students' transition from kindergarten to grade one are most relevant to this review of literature. Ninety percent of the kindergarten teachers, 92 percent of the grade one teachers, and 86 percent of the principals indicated they perceived that some children had difficulty making the transition from kindergarten to grade one. Of the grade one parents who responded, 28 percent said their child had difficulty making this transition. When asked why they thought some children had difficulty making this transition, the kindergarten, first grade teachers, principals, and parents mentioned three areas of difficulty. Nearly half the grade one teachers (48 percent) and kindergarten teachers (43 percent) thought the reason for the difficulty was "immaturity," possibly as a result of late birthdays. None of the parents and only 4.5 percent of the principals suggested late birthdays/immaturity as the reason. Principals responded with an equal split (32 percent) between health reasons and general readiness. Fifty percent of the parents felt that their child had difficulty making the transition because of the increase in expectations for children in grade one. The increased structure and the first grade curriculum was cited by 27

percent of the kindergarten teachers and 17 percent of the grade one teachers. Principals and teachers favored K-1 transition classes for children who need more time to mature as well as for children for whom less than a year of kindergarten would be sufficient. Teachers and administrators agreed that there was a need for "more coordination of kindergarten and primary grade programs and more communication between kindergarten and grade one teachers" (Mayfield, 1983, p. 281). When asked to state the advantages of the grade one transition classes, the teachers and principals all reported that giving children more time to mature, more time to master specific skills, more individualized teaching in the transition classes, and prevention of a pattern of failure were advantages to such a program. The only disadvantage was cited by principals who mentioned the administrative and organizational difficulties associated with a transition program.

Dolan (1982) studied the effects of a transition class program for children with school and learning readiness problems in a school district near Rochester, New York. The transition class, as an alternative for kindergarten students who were not ready for the first grade, had been in operation for six years. Dolan conducted a follow-up evaluation of the effects of four different treatment groups (students who went to a transition class before promotion to first grade, students who attended a

transition class after first grade and before second grade, students whose parents refused any placement in a transition class, and a control group of students who were matched to transition room students on the variables of gender and quarter of birth). Only students who had been in the district since the first grade were included in the study. Results over the six year period confirmed that there were no significant differences in achievement between either transition group. The academic performance of students whose parents refused transition placement, however, was inferior and the subsequent need for special services was significantly higher.

One recent study to determine the effects of a transition year for students who have completed kindergarten but who are judged to be unprepared for the first grade curriculum was conducted by Kilby (1984). This study was an ex post facto evaluation of the junior first grade program in Sioux Falls, South Dakota. The goal of the program was to provide students with an academically, socially, and emotionally strong foundation to improve their chances of success in the primary grades (Solem, 1981). Findings indicated the program had a positive impact on reading achievement, lowered the placement rate in special education classes for learning disabilities, and lowered the future rate of grade repetition. Students who completed the junior first grade demonstrated superior

reading achievement in the fourth grade compared to students who had not attended junior first grade. This gain was maintained through the eighth grade. Placement in learning disability programs was significantly less frequent for junior first grade participants compared to their agemates who had not attended the junior first grade program. The frequency of grade repetitions was significantly lower than for students who had not attended the junior first grade.

> Only one-tenth of one percent of the students who had attended junior first grade had to repeat a grade in the years following program participation. By contrast, an average of 27 percent of their counterparts repeated one grade and an average of 13 percent repeated two grades (Kilby, 1984, p. 30).

According to Kilby, there are three aspects which are involved in the prevention of failure in the elementary school:

> . . . the identification of students who may be at risk of future academic difficulties, the development of early intervention programming for students who are identified, and the evaluation of program impact, both negative and positive (p. 31).

In an effort to learn more about the long-term effects of nonpromotion and an alternative, the junior first grade, Sandoval and Fitzgerald (1985) examined the attitudes and school progress of adolescents who had repeated a grade, or who had participated in a junior first grade program. The adolescents in this study consisted of the entire

population of the single high school in a Northern California suburban-rural community who had repeated one grade (41 students) or had been in the district's junior first grade program (34 students). Seventy-five control students were matched at random to these students from those of the same gender taking the same high school English class. The researchers believed that by matching the students in the same classroom, to the extent there is tracking or self-selection of courses, there would be control for ability and motivation. Students who were enrolled in special education classes were eliminated, which reduced the group sizes to 30, 32, and 75, respectively. Fifty-six percent of the adolescents were male and 44 percent were female. Children who had been selected for the junior first grade program were those who were considered to be immature socially and emotionally, who were intellectually capable in spite of the immaturity, and whose parents agreed to the placement. Sandoval and Fitzgerald attempted to answer the following questions:

(1) Do high school students who have earlier repeated a grade or been in a junior first grade program believe the experience helped them academically, socially, and emotionally?

(2) Is there a difference between those who repeated a grade and those who entered a junior first grade with respect to their evaluation of those programs?

(3) Is there a difference in general attitude toward nonpromotion by retainees, participants in the junior first grade program, and their fellow students?

(4) Is there a difference in school performance for the three groups?

(5) Is attitude related to grade retained?

Sandoval and Fitzgerald found that students who had attended a junior first grade program scored higher on standardized achievement tests and were receiving better grades in their classes than the other two groups. The grade repeaters scored lower than the other two groups. Both the retained group and the junior first grade group reported positive benefits relative to the experience. Very few students indicated the experiences to be somewhat harmful or negative. The researchers found that the later the retention in the students' school career, the poorer their high school achievement. Sandoval and Fitzgerald concluded from this study that students who had participated in the junior first grade program reflected positive attitudes toward the program. The academic performance of these students also supported the implementation of the junior first grade program since these students were superior to the control group in academic performance. Sandoval and Fitzgerald (1985) summarized their findings with the following comments:

> Junior first grade participants at the time of high school had become indiscernible from their peers. Although unrelated to attitude, time of intervention (either grade retention or the junior first grade program) was related to scholastic achievement. Those children who were placed in the junior first grade program or retained early in the elementary grades had better high school grades and made better academic progress. Either early retention had the desired effects, or later grade retention had detrimental impacts on students, or both. Then, too, later grade retention may more likely result from poor achievement and be used as a last resort with unmotivated or unsuccessful children. In sum, the present study provides some evidence that the junior first grade program lives up to the expectations of district personnel (pp. 170-171).

Literature Opposing Pre-First Grade Programs

Gredler (1984) reviewed six studies conducted from 1950 to 1982 which investigated the results of transition or pre-first grade classes on the academic performance of students. The six studies reviewed by Gredler were as follows: McDaid in 1950, Liddle and Long in 1958, Bell in 1972, Raygor in 1972, Matthews in 1977, and Talmidge in 1981. According to Gredler, in only two of these studies (Raygor and Liddle and Long) was there an achievement gain for children in the transitional programs. Gredler emphasized the importance of further educational intervention within the regular classroom for the educationally at risk child. Gredler suggested:

> It is possible to make changes in transition room programs to meet the educational and legal objections, and such changes must be considered carefully by school personnel if a transition program is to continue to be used (Gredler, 1984, p. 469).

Leinhardt (1980) investigated the impact of assigning poor prognosis first grade students to separate transition rooms as opposed to giving similar children (transition eligible) regular instruction in an integrated setting. Leinhardt's study was conducted in all four elementary schools in an urban school district. The district population (kindergarten through grade two) was approximately 62 percent Black, and the district was in a middle to low income area. All first grade students in the district were included in the study. The data on student performance consisted of pre-tests administered in the late spring of the kindergarten year and post-tests administered in the late spring of the next year. The academic progress, in reading, of students assigned to "segregated" transition programs versus students who were promoted to "integrated" regular first grade programs was compared. Leinhardt concluded from this study that "students can be reliably and, in a sense, validly identified as having poor prognoses" (p. 59). The results also indicated that instruction was most effective in an integrated setting rather than in a segregated setting, such as a transition classroom environment.

> The results of this study, although limited by small sample size and single location, seem to suggest that children can be consistently and objectively identified as poor prognosis learners at the end of kindergarten or the beginning of first grade. Also, the treatment alternative of placing such children in small, homogeneous settings and focusing on learning to learn skills, rather than taking a direct approach to reading, showed no advantages in terms of growth and showed some disadvantages at least as measured by the SAT (Leinhardt, 1980, p. 60).

Zinski (1983) selected three pairs of schools in the Hillsborough (Florida) County Public School System to study the effects of a pre-first grade transition class on reading achievement as compared with students who had been retained in first grade. Students were matched on the following variables: age, gender, race, socioeconomic status, and the Florida Primary Education Program strategies. The comparisons were made on 20 pairs of students consisting of a transitional student and a non-transitional student. Transitional students were placed in the program at the end of their kindergarten year. Non-transitional students were those students who were identified at the end of their first grade year as retainees. The transition repeater students were compared to the non-transition repeaters at the end of their second year in first grade. Performance on the California Test of Basic Skills and the reading achievement level in the Holt Reading Series was used to assess the achievement for both groups. No

significant differences were found in achievement for either group of students.

Discussion of the Research

The review of the literature has attempted to bring to the reader's attention the controversy surrounding the issue of whether school districts should retain students who have not attained mastery of the academic curriculum. This issue continues to be a major concern to many school districts throughout the United States.

After reviewing the literature, it is apparent the wholesale retention of students who do not meet grade level expectations is not a solution to the complicated curriculum decisions faced by school districts today. Studies which have analyzed the research relative to the benefits of retention (Jackson, 1975; Niklason, 1984; Rose et al., 1984) support the contention that for the majority of students, grade retention fails to produce a significant increase in student academic achievement. The literature indicates, however, that some students who are retained at the kindergarten or first grade levels because of developmental immaturity appear to make better achievement gains than students who are retained at the intermediate grades or higher.

The studies providing evidence to support grade retention at the primary grades, i.e., a significant

improvement in student academic achievement was found (Lobdell, 1958; Chase, 1968; Scott and Ames, 1969; Reinherz and Griffin, 1970), suggest there may be a certain type of student who does profit from an additional year of school at the primary level. One factor related to the improved academic achievement appears to be whether or not this additional year provided a curriculum which supported the developmental and academic needs of the individual student. Is it possible that providing this type of child with a developmental curriculum program such as pre-first grade will achieve positive gains in academic achievement? If this is found to be true, then school districts might wish to consider a pre-first grade program as a viable curricular alternative for some students. The literature thus far is inconclusive. Studies such as the one conducted by Kilby (1984) support the implementation of a pre-first grade transition program, while studies such as the one conducted by Leinhardt (1980) do not.

It remains unclear whether those studies in opposition to the benefits of a pre-first grade program ever identified the type of child who was being retained or assigned to a transition classroom. The type of child who is assigned to a pre-first grade curriculum may indeed be as significant a factor as the curriculum itself. Other studies, such as the one conducted by Scott and Ames (1969), suggests that students who will profit the most

academically from an additional year in a program such as a pre-first grade are those students who have been retained due to developmental immaturity. Students who are designated as being "at risk" for promotion due to other factors, such as emotional disturbances, learning disabilities, and cultural differences, may not profit academically from this additional year. More research is necessary to help school districts determine whether the implementation of a pre-first grade program does positively impact the academic achievement of students who are designated as being "at risk" for promotion to the first grade.

This study was initiated to examine the effects of a pre-first grade program, retention in kindergarten, or promotion to the first grade on the academic achievement of kindergarten students determined to be "at risk" for promotion to the first grade. It is the intent of this investigation to provide a clearer understanding of the efficacy of these three curriculum alternatives at the primary level.

CHAPTER 3

METHOD AND PROCEDURE

Introduction

The problem of this study was to determine if there was a significant difference in the level of academic achievement assessed upon completion of grade one, among students who were designated as being "at risk" for promotion to the first grade, when these "at risk" students were either retained in kindergarten, promoted to the first grade, or promoted to a transition pre-first grade program.

The procedures that were used to collect, organize, and analyze the data are described in this chapter. The topics and procedures presented in this chapter are as follows: (1) sample description, (2) data collection, (3) test instruments, (4) organization of data, (5) statistical hypotheses, and (6) analysis of data.

Sample Description

All kindergarten students who were designated as being "at risk" for promotion to the first grade at the end of the 1983-84, 1984-85, and 1985-86 school years from six elementary schools in two Northern Rocky Mountain community

school districts comprised the sample of students studied. At the time of the study the grade placement of these students ranged from the first through the fourth grade.

The combined kindergarten through twelfth grade student population of the two school districts participating in the study was approximately 6,000 students. Both school districts serve predominately white, middle class, rural communities. The population of each community is less than 20,000. Light industry and manufacturing, agriculture, and small business enterprises contribute to the local economies.

The kindergarten students under investigation were those students from the 1983-84, 1984-85, and 1985-86 school years who were considered to be "at risk" for promotion to the first grade. The students were assigned to grade placements following each school's regular policy regarding grade placement recommendations. The four groups under investigation consisted of those "at risk" kindergarten students who were either placed in a pre-first grade transition program, who were retained in kindergarten, or who were promoted to the first grade because of parental disagreement with the school's placement recommendation, and a fourth group of students who were not considered to be "at risk" for promotion to the first grade. The fourth group, which served as a comparison group, was randomly selected from those kindergarten students at the end of the

1983-84, 1984-85, and 1985-86 school years who were considered to be eligible for promotion to the first grade. An independent proportional random sample of those students was selected so the proportion of males to females would closely approximate the sample under investigation. The larger number of students in the comparison group compared to the pre-first grade group was due to the subsequent attrition of pre-first grade students.

Students who were retained in kindergarten or who were assigned to the pre-first grade were, after their additional year, randomly assigned by their schools to first grade classrooms. The students who were promoted to the first grade because of parental disagreement with the placement recommendation and the students in the comparison group were also randomly assigned by their schools to first grade classrooms.

Data Collection

The Metropolitan Achievement Test, Primary Level, Form L, was administered to the 63 first grade students in District 1 in April of their first grade year. The Iowa Tests of Basic Skills, Form 7, was administered to the 253 first grade students from District 2 in January of their first grade year. The percentile scores for the total Reading and Mathematics subsections were utilized. The data were analyzed to determine if there was a significant

difference in the reading and mathematics achievement scores among the four groups under investigation.

The teachers and parents of all students who had been previously assigned to the four groups under investigation were sent a survey questionnaire during the 1987-88 school year (Appendices A and B). The parents and teachers were surveyed to determine the percent of agreement with the eight statements on either the Parent Questionnaire or the Teacher Questionnaire. A sociometric questionnaire (Appendix C) was individually administered to the students from seven classrooms (five first grade and two second grade) within the two school districts whose group membership consisted of students from the groups under investigation. This survey was conducted to determine if a greater percent of students from one group was selected as either first, second, or third choice on any of the four questions on the sociometric questionnaire.

Test Instruments

The following test instruments were utilized in this study:

(1) The Metropolitan Achievement Tests, 5th edition, Primary Level, Form L (1978).

(2) The Iowa Tests of Basic Skills, Form 7 (ITBS) (1978).

(3) A standard sociometric test (adapted from Northway and Weld, 1966).

(4) An individual parent questionnaire (developed by the researcher).

(5) An individual teacher questionnaire (developed by the researcher).

The Metropolitan Achievement Tests

The Metropolitan Achievement Tests have been widely used since the publication of the first edition in 1937 (Linn, 1978). The fifth edition of the Metropolitan Achievement Tests (MAT) provides a comprehensive system of "survey" tests for measuring achievement in reading, mathematics, and language at grades K through 12, as well as science and social studies at grades 1.5 through 9. The Metropolitan Achievement Tests have been developed using sound test construction, extensive norming and validation, and exemplary documentation established by earlier editions of the MAT (Haertel, 1978).

Norms are provided for this edition of the MAT, including percentile ranks and stanines, for both fall and spring administrations. Norms are based on separate, matched student samples tested in fall and spring. The Kuder-Richardson formula reliability coefficients are nearly all over .80, with many over .90. Haertal (1978) maintained that content validity should not be assumed, however, until test materials are compared to the local

curriculum, especially the science and social studies survey tests.

The Iowa Tests of Basic Skills

The Iowa Tests of Basic Skills (ITBS) is also a well-respected and widely used test battery. This battery is intended to provide "comprehensive and continuous measurement of growth in the fundamental skills: vocabulary, reading, the mechanics of writing, methods of study, and mathematics" (Airasian, 1978, p. 717). A major change in Form 7 is the revision of the mathematics skills subtests. The Problem Solving Subtest is revised, there is a new Computation Subtest, and a separate Concepts Subtest.

According to Nitko (1978), the battery is designed for two basic purposes: (1) to facilitate within the classroom such decisions as the diagnosis of strengths and weaknesses, as well as the individualization of instruction; and (2) to facilitate decisions external to the classroom, such as determining the effectiveness of curricular and instructional innovations, and identifying grade level, building, or school system strengths and weaknesses. Nitko perceived the ITBS "to be an excellent basic skills battery measuring global skills that are likely to be highly related to the long-term goals of elementary schools" (p. 534).

The ITBS was normed in the Fall of 1977 on 12,000 to 18,000 pupils per grade level. School districts were stratified by size, region, and community socioeconomic status. A total of 165 school districts were sampled. Subsamples of about 3,000 students per grade were retested to provide spring norms. The within-grade Kuder-Richardson 20 reliabilities for the 11 subtests and total scores are generally greater than .85, with many exceeding .90. The K-R 20 reliability of the composite score for each grade level of the test is .98 (Airasian, 1978). The content validity of an achievement test battery such as this relies on the judgment of the district to determine if there is an accurate match between the skills assessed and the local curriculum.

Sociometric Test

A standard sociometric test (adapted from Northway and Weld, 1966) (Appendix C) was utilized to determine the percent of students from each of the four groups under investigation who were selected as either first, second, or third choice on any of the four questions on the sociometric questionnaire.

> The practice of sociometry consists of the administration of a questionnaire in which the subject chooses five other people in rank order of their attractiveness as associates, either generally or in relation to some specific activity. The results are plotted on paper in diagrammatic form, hence the term

sociogram (Dictionary of Modern Sociology, 1963).

Mouton et al. (1955) studied the reliability and validity of 53 sociometric studies. They came to the following conclusions concerning the reliability of such instruments:

(1) The longer the time interval between test and retest, the less the consistency of sociometric judgments.

(2) The closer the age of the subjects to adulthood, the more the test-retest consistency of sociometric judgments.

(3) The longer the subjects have known one another prior to the first test, the greater the consistency in sociometric judgments between test and retest.

(4) The more relevant the criterion of choice by which judgments are made to the activity or group, the greater the consistency of sociometric responses between test occasions.

(5) The larger the number of discriminations required by the techniques of choosing, the greater the consistency of sociometric judgments between test and retest.

(6) The larger the group from which choices are made, the greater the consistency.

(7) The larger the number of discriminations elicited by the measurement technique, the greater the correlation

between the measures derived from those techniques on a single occasion.

(8) Where the strength of preference is indicated by the ordering of choices, the stronger the choice the less the change in choices given between test occasions.

(9) The greater the similarity of criteria of choosing in terms of social-psychological considerations, the larger the correlations between them.

Regarding the validity of sociometric measures, Mouton et al. (1955) concluded:

> While the reports included are of uneven quality, the consistency in the findings that have been reported by different investigators can be taken as evidence that the sociometric choice provides a valuable method of measuring personal and group characteristics (p. 203).

Individual Parent Questionnaire

An individual parent questionnaire, developed by the researcher, was sent to all parents of those children who were members of one of the four groups under investigation. The instrument was field tested with a sample of 25 parents from another school district to determine the clarity of the questions and whether the questions obtained the desired information. Several questions were rephrased for clarity following parental suggestions.

Individual Teacher Questionnaire

An individual teacher questionnaire, developed by the researcher, was administered to all first through fourth grade teachers whose classroom membership was comprised of students from one or more of the four groups under investigation. This instrument was field tested with a sample of 25 teachers from another school district to determine the clarity of the questions and whether the questions obtained the desired information. Several questions were reworded for clarity after consultation with the teachers.

The teachers were asked to use their professional judgment to assess the academic achievement and classroom behavior of each of the students in the four groups under investigation. Cooksey et al. (1985) studied the research relative to the accuracy of teacher judgment done by Borko and associates in 1979, who pointed out:

> A teacher's expectations concerning the interests, abilities, and dispositions of students are not only appropriate but important elements in the process of arriving at instructional, diagnostic, and management decisions (Cooksey et al., 1985, p. 42).

A study by Mattick (1963) compared the judgment of kindergarten and first grade teachers with the results of four standardized tests to determine the effectiveness of teachers in predicting the future academic success of kindergartners in the first grade. The coefficient of

correlation between the kindergarten teachers' judgment of first grade success and the Metropolitan Readiness Test was .546. The coefficient of correlation obtained between five kindergarten predictive variables and the criterion variable of kindergarten teachers' judgment was .429 as compared with the correlation of the Metropolitan Readiness Test at .559. Mattick (1963) concluded:

> It was especially notable that the Metropolitan Readiness Tests were superior to the kindergarten teachers' judgments in predicting early first-grade success. Similar studies conducted in higher grades have found that teachers' judgments are usually superior to any single standardized test in forecasting the future achievement of pupils. While the high coefficient of correlation between the Metropolitan Readiness Tests and kindergarten teachers' ratings would indicate that the tests and the ratings measured many of the same characteristics, the Metropolitan Readiness Tests apparently assessed additional aspects of pupil ability closely related to first-grade expectancies of pupils (p. 276).

Egan and Archer (1985) maintained that, directly or indirectly, the accuracy of teachers' assessments of student ability is often an issue in educational research in spite of the fact that:

> There is no compelling evidence that teachers' ratings are in fact inaccurate. Since the early 1920's, there have been dozens of studies reporting correlations in the order of .5 to .6 between teacher ratings and various standardized tests. These correlations may be considered as coefficients of concurrent validity, and as such they are quite large (p. 26).

Egan and Archer (1985) reported a four year study conducted by Kellaghan, Madaus and Airasian between 1973 and 1977 in the Republic of Ireland on the effects of standardized testing. These researchers believed that at the time of the study teachers were relatively unfamiliar with standardized tests and therefore the data were suitable for their purposes because "it could not be claimed that the ratings had been 'educated' into congruence with test scores over years of exposure to them" (p. 28). The results of the four year study found the correlations between second grade teachers' ratings and second grade students' mathematics and English test scores to be .58 and .65, respectively.

Organization of Data

The descriptive data obtained from this study are presented in table form. These descriptive data include the means and standard deviations for each of the groups under investigation. Analysis of variance tables are presented for the results of the reading and mathematics achievement test scores. The results of the parent and teacher surveys are presented in the form of tables to provide descriptive data relative to the percent of parents and teachers who agreed with each of the eight statements. A summary of the results of the sociometric questionnaires of the first and second grade classrooms is also presented

in table form. A summary of the results for each classroom can be found in Appendix C.

Statistical Hypotheses

This study was ex post facto and quasi-experimental in nature. A two by four factorial design was utilized to analyze the data with the independent variables, group assignment and gender. The null hypotheses were tested at the .05 level of significance. The choice of the level of significance is determined by the consequences of making a Type I or a Type II error. Levels of significance such as .05 or .01 are commonly accepted depending on the consequences of making a Type I error (Kerlinger, 1965; Ferguson, 1981). A Type I error would result if a true null hypothesis was rejected. In this study a Type I error would result in a district possibly implementing a pre-first grade program when the implementation of such a program does not result in improved student academic achievement. A Type II error, however, might cause a school district to avoid implementation of a program which would indeed be responsible for improving student academic achievement. School districts are concerned with improving student academic achievement; however, they often have limited financial resources. The .05 level was chosen for this study as a compromise between the .01 level of significance and the .1 level of significance. The Tukey

Studentized Range Statistic was utilized as a planned multiple comparison technique as a compromise between the use of the Scheffe which is more conservative in discriminating significant differences among groups and the Newman-Keuls which is less conservative. For all statistical hypotheses tested, the p values are reported.

The first six general questions in Chapter 1 have been answered by the following hypotheses:

Null Hypothesis 1: There is no interaction between the independent variables, group assignment and gender, on the dependent variable, reading achievement, at the end of grade one.

Null Hypothesis 2: There is no significant difference in the reading achievement of males and females at the end of grade one.

Null Hypothesis 3: There is no significant difference in the reading achievement among the four groups of students at the end of grade one.

Null Hypothesis 4: Chronological age and gender do not account for a significant portion of the variability in reading achievement scores at the end of grade one.

Null Hypothesis 5: There is no interaction between the independent variables, group assignment and gender, on the dependent variable, mathematics achievement, at the end of grade one.

Null Hypothesis 6: There is no significant difference in the mathematics achievement of males and females at the end of grade one.

Null Hypothesis 7: There is no significant difference in the mathematics achievement among the four groups of students at the end of grade one.

Null Hypothesis 8: Chronological age and gender do not account for a significant portion of the variability in mathematics achievement scores at the end of grade one.

Questions to Be Answered

(1) What is the percent of parental agreement to the eight statements on the Parent Questionnaire among the four groups under investigation?

(2) What is the percent of teacher agreement to the eight statements on the Teacher Questionnaire among the four groups under investigation?

(3) Is there a greater percentage of students chosen from one group under investigation as either a first, second, or third choice on any of four items on a sociometric questionnaire than students from another group?

Analysis of Data

The statistical procedures used in this study included two-way analysis of variance (ANOVA) and multiple

regression (Kerlinger, 1965; Ferguson, 1981). Two-way analysis of variance was utilized to test Hypotheses 1 through 3 to determine if there was interaction between the independent variables, group assignment and gender, on the dependent variable, reading achievement, at the end of the first grade. Two-way analysis of variance was also utilized to test Hypotheses 4 through 6 to determine if there was interaction between the independent variables, group assignment and gender, on the dependent variable, mathematics achievement. Since there was no interaction between the independent variables, gender and group assignment, on either dependent variable, the main effects of the independent variables on both reading and mathematics achievement were tested. The Tukey Studentized Range Test was utilized as a planned multiple comparison technique since a significant difference among the groups in reading and mathematics achievement was found.

CHAPTER 4

ANALYSIS OF DATA

Introduction

The problem of this study was to determine if there was a significant difference in the level of academic achievement assessed upon completion of grade one, among students who were designated as being "at risk" for promotion to the first grade, when these "at risk" students were either retained in kindergarten, promoted to the first grade, or promoted to a transition pre-first grade program.

Eight hypotheses were tested for this investigation. The effects of three independent variables, student group assignment, gender, and chronological age, on the reading and mathematics achievement scores of first grade students were analyzed. For the purpose of testing significance, the .05 alpha level was selected. For all statistical hypotheses tested, the p-values are reported. The order of presentation of the hypotheses in Chapter 3 is followed in the analysis and presentation of the data.

Characteristics of the Sample

The sample of this study was comprised of 312 students, 122 females and 190 males. The reading and mathematics achievement of the following four groups of students was measured at the end of their first year in grade one.

(1) Group 1: First grade students who were considered to be "at risk" for promotion to the first grade at the end of their kindergarten year and who were retained in kindergarten (N=48; M=37, F=11).

(2) Group 2: First grade students who were considered to be "at risk" for promotion to the first grade at the end of their kindergarten year but who were promoted to the first grade (N=35, M=17, F=18).

(3) Group 3: First grade students who were considered to be "at risk" for promotion to the first grade at the end of their kindergarten year and who were promoted to the pre-first grade (N=107; M=61, F=46).

(4) Group 4: First grade students who were not considered to be "at risk" for promotion to the first grade at the end of their kindergarten year and who were promoted to the first grade (comparison group, N=122; M=75, F=47).

Table 1 summarizes the mean achievement test scores for reading and mathematics and the mean chronological age

for males and females. The data indicate the mean percentile score for reading achievement was higher for females and the mean percentile achievement test score in mathematics achievement was higher for males.

Table 1. Mean achievement percentile scores by gender.

	Reading	Math	Chron. Age
Males (N=190)			
Mean	64.78	68.29	7.46
Standard Dev.	26.39	23.56	.45
Females (N=122)			
Mean	68.75	66.25	7.34
Standard Dev.	24.14	25.31	.49

Table 2 summarizes the mean achievement percentile scores for reading and mathematics and the mean chronological age for each of the four groups. The pre-first grade students had the highest mean test scores on both the reading and mathematics achievement tests followed by the comparison group, the promoted students, and the retained students, respectively.

Table 3 summarizes the mean achievement percentile scores for reading and mathematics for males and females in each of the four groups. Mean mathematics achievement test scores for males were higher than for females, while the

mean reading achievement test scores for females were higher except for the "not at risk" comparison group of students.

Table 2. Mean achievement percentile scores by group.

Group	Reading	Math	Chron. Age
Group 1 (Retained in K)			
Mean	49.62	55.54	7.70
Standard Dev.	27.76	27.63	.28
Group 2 (At Risk Promoted)			
Mean	58.77	59.20	7.03
Standard Dev.	24.68	26.95	.41
Group 3 (Pre-first)			
Mean	73.67	71.87	7.70
Standard Dev.	23.00	22.81	.34
Group 4 (Not At Risk)			
Mean	68.64	70.74	7.12
Standard Dev.	23.80	21.20	.40

Table 3. Mean achievement percentile scores by group and gender.

Group		Reading	Math
Group 1 (Retained in K)			
Males:	Mean	49.30	56.62
	Standard Dev.	27.88	28.30
Females:	Mean	50.72	51.91
	Standard Dev.	28.67	26.21
Group 2 (At Risk Promoted)			
Males:	Mean	53.59	62.71
	Standard Dev.	27.38	26.71
Females:	Mean	63.67	55.89
	Standard Dev.	21.46	27.53
Group 3 (Pre-first)			
Males:	Mean	72.54	72.92
	Standard Dev.	24.86	19.78
Females:	Mean	75.17	70.47
	Standard Dev.	20.43	26.46
Group 4 (Not At Risk)			
Males:	Mean	68.64	71.55
	Standard Dev.	22.90	21.28
Females:	Mean	68.64	69.45
	Standard Dev.	25.43	21.23

Hypotheses 1 through 4

The results of the two-way analysis of variance with the independent variables, group assignment and gender, and

the dependent variable of reading achievement are summarized in Table 4.

Table 4. Two-way ANOVA of reading percentiles for grade one.

Source	DF	Sum of Squares	Mean Squares	F-Value	p
Group	3	17477.1	5825.7	9.81	.0001*
Gender	1	665.4	655.4	1.10	.2942
Group x Gender	3	691.3	230.4	.39	.7616
Error	304	180447.9	593.6		

*Statistically significant

Null Hypothesis 1: There is no interaction between the independent variables, group assignment and gender, on the dependent variable, reading achievement, at the end of grade one.

The null hypothesis was retained at the alpha = .05 level, as shown in Table 4. There was no interaction between the independent variables, group assignment and gender, and the dependent variable, reading achievement, at the end of grade one (p=.7616).

Null Hypothesis 2: There is no significant difference in the reading achievement of males and females at the end of grade one.

The null hypothesis was retained at the alpha = .05 level, as presented in Table 4. There was no significant difference in the reading achievement scores of males and females at the end of grade one (p=.2942).

Null Hypothesis 3: There is no significant difference in the reading achievement among the four groups of students at the end of grade one.

The null hypothesis was rejected at the alpha = .05 level, as shown in Table 4. There was a significant difference in the reading achievement scores among the four groups at the end of grade one (p=.0001).

The results of the Tukey Studentized Range Test for reading indicate the significant differences between groups occurred between Group 1 (retained) and Group 3 (Pre-first) with Group 3 > Group 1; Group 2 (At Risk Promoted) and Group 3 (Pre-first) with Group 3 > Group 2; and Group 1 (Retained) and Group 4 (Not At Risk) with Group 4 > Group 1. The mean reading and mathematics achievement test scores for each group are summarized in Table 2.

The results of the multiple regression analysis of variance with the independent variables, chronological age and gender, and the dependent variable, reading achievement, are presented in Table 5.

Table 5. Multiple regression ANOVA for reading achievement.

Source	DF	Sum of Squares	Mean Squares	F-Value	p
Model	2	1576.3	788.2	1.207	.3005
Error	309	2017773.0	653.0		
Total	311	203349.3			
R-square			.0078		
Adj. R-square			.0013		

Null Hypothesis 4: Chronological age and gender do not account for a significant portion of the variability in reading achievement scores at the end of grade one.

The null hypothesis was retained at the alpha = .05 level, as shown in Table 5 (p=.3005). Chronological age and gender do not account for a significant portion of the variability in reading achievement scores at the end of grade one. The adjusted R-square for applying this model was .0013. The amount of variance that can be accounted for by the independent variables of chronological age and gender was less than one percent.

Hypotheses 5 through 8

The results of the two-way analysis of variance with the independent variables, group assignment and gender, and the dependent variable, mathematics achievement, are summarized in Table 6.

Table 6. Two-way ANOVA of mathematics percentiles for grade one.

Source	DF	Sum of Squares	Mean Squares	F-Value	p
Group	3	11171.4	3723.8	6.69	.0002*
Gender	1	846.5	846.5	1.52	.2185
Group x Gender	3	183.2	61.1	.11	.9544
Error	304	169203.2	556.6		

*Statistically significant

Null Hypothesis 5: There is no interaction between the independent variables, group assignment and gender, on the dependent variable, mathematics achievement, at the end of grade one.

The null hypothesis was retained at the alpha = .05 level, as shown in Table 6. There was no interaction between the independent variables, group assignment and gender, on the dependent variable, mathematics achievement, at the end of grade one (p=.9544).

Null Hypothesis 6: There is no significant difference in the mathematics achievement of males and females at the end of grade one.

The null hypothesis was retained at the alpha = .05 level, as presented in Table 6. There was no significant difference in the mathematics achievement of males and females at the end of grade one (p=.2185).

Null Hypothesis 7: There is no significant difference in the mathematics achievement among the four groups of students at the end of grade one.

The null hypothesis was rejected at the alpha = .05 level, as shown in Table 6. There was a significant difference in the mathematics achievement scores among the four groups at the end of grade one (p=.0002).

The results of the Tukey Studentized Range Test for mathematics indicate the significant differences between groups occurred between Group 1 (Retained) and Group 4 (Not

At Risk) with Group 4 > Group 1; Group 2 (At Risk Promoted) and Group 3 (Pre-first) with Group 3 > Group 2; and Group 1 (Retained) and Group 3 (Pre-first) with Group 3 > Group 1. The mean reading and mathematics achievement scores for each group are summarized in Table 2.

The results of the multiple regression analysis of variance with the independent variables, chronological age and gender, and the dependent variable, mathematics achievement, are presented in Table 7.

Table 7. Multiple regression ANOVA for mathematics achievement.

Source	DF	Sum of Squares	Mean Squares	F-Value	p
Model	2	789.4	394.7	.670	.5122
Error	309	181888.6	588.6		
Total	311	182678.0			
R-square			.0043		
Adj. R-square			.0021		

Null Hypothesis 8: Chronological age and gender do not account for a significant portion of the variability in mathematics achievement scores at the end of grade one.

The null hypothesis was retained at the alpha = .05 level, as shown in Table 7. Chronological age and gender do not account for a significant portion of the variability in mathematics achievement scores at the end of grade one (p=.5122). The adjusted R-square for applying this model

was .0021. The amount of variance accounted for by the independent variables, chronological age and gender, was less than one percent.

Parent Survey Data

The Parent Questionnaire (Appendix B) was sent to the parents of the 312 students who comprised the sample of students in the study. The number of surveys sent to each of the parents in the four groups were as follows: 48 surveys were sent to the parents of the students who were retained in kindergarten (Group 1); 35 surveys were sent to the parents of the "at risk" students who were promoted because their parents refused the placement (Group 2); 107 surveys were sent to the parents of the pre-first grade students (Group 3); and 122 surveys were sent to the parents of the students in the comparison group (Group 4). The parents of the pre-first grade students had the highest rate of return at 81 percent, followed by the comparison group parents at 77 percent, the retained group parents at 67 percent, and the parents of the "at risk" promoted students at 62 percent. A total of 239 completed surveys were returned which represented a return rate of 77 percent.

Tables 8 through 15 present the percent of parents who were in agreement or disagreement with each of the eight survey statements. The percent of parents who elected not

to respond to a particular statement is indicated in the "no response" (NR) column.

Table 8. Parent survey data for statement #1.*

*I was in agreement with the school's placement recommendation for my child at the end of the first year of kindergarten.

Student Group	% Agreed	% Disagreed	% NR
Retained students	97	0	3
Promoted students	70	30	0
Pre-first grade students	83	10	7
Comparison students	86	7	7

Table 9. Parent survey data for statement #2.*

*If I had to make the same decision again, I would support the same grade level placement recommendation for my child.

Student Group	% Agreed	% Disagreed	% NR
Retained students	94	3	3
Promoted students	78	22	0
Pre-first grade students	95	0	5
Comparison students	89	7	4

Table 10. Parent survey data for statement #3.*

*My child is doing well in school in reading.

Student Group	% Agreed	% Disagreed	% NR
Retained students	75	25	0
Promoted students	78	22	0
Pre-first grade students	84	11	5
Comparison students	88	11	1

Table 11. Parent survey data for statement #4.*

*My child is doing well in school in math.

Student Group	% Agreed	% Disagreed	% NR
Retained students	88	9	3
Promoted students	96	4	0
Pre-first grade students	91	3	6
Comparison students	89	7	4

Table 12. Parent survey data for statement #5.*

*My child likes school.

Student Group	% Agreed	% Disagreed	% NR
Retained students	97	3	0
Promoted students	96	4	0
Pre-first grade students	91	0	9
Comparison students	94	4	2

Table 13. Parent survey data for statement #6.*

*My child is attending a good elementary school.

Student Group	% Agreed	% Disagreed	% NR
Retained students	100	0	0
Promoted students	96	0	4
Pre-first grade students	93	1	6
Comparison students	97	0	3

Table 14. Parent survey data for statement #7.*

*The elementary school is meeting the needs of my child.

Student Group	% Agreed	% Disagreed	% NR
Retained students	91	9	0
Promoted students	96	0	4
Pre-first grade students	90	1	9
Comparison students	90	6	4

Table 15. Parent survey data for statement #8.*

*My child gets along well with other children and is well liked by the other students in his/her class.

Student Group	% Agreed	% Disagreed	% NR
Retained students	88	12	0
Promoted students	91	0	9
Pre-first grade students	92	0	8
Comparison students	93	4	3

Parental agreement to the eight statements on the Parent Questionnaire ranged from a low of 70 percent for the parents of students in Group 2 (At Risk Promoted) to statement 1 ("I was in agreement with the school's placement recommendation for my child at the end of the first year in kindergarten") to a high of 100 percent agreement for the parents of students in Group 1 (At Risk Retained) to statement 6 ("My child is attending a good elementary school"). For a complete summary of the results of the Parent Questionnaire, refer to Appendix E.

An analysis of the results of the parent survey indicates a relatively high percentage of parents perceived their child's school as being a good school and meeting the needs of their child. They also believed their child to be doing well in reading and math and in getting along well with other students. In response to statement 2 ("If I had to make the same decision again, I would support the same grade level placement recommendation for my child"), the pre-first grade parents appeared to be the most confident regarding their decision to place their child in the pre-first grade program. The parents of the "at risk" students who were promoted appeared to be less confident about their decision to promote their children against the recommendation of the school. The parents of "at risk" students promoted to the first grade were least likely to agree (70 percent) with the school's placement recommendation at the

end of the student's first year in kindergarten, followed by the parents of the pre-first grade students (83 percent agreement). The parents of the "at risk" promoted students, when asked if they would make the same decision again, were also least likely to agree that they would. The parents of students in the pre-first grade program, however, had the highest percent of agreement (95 percent) to this same statement. The parents of the "at risk" promoted students were also the least likely to agree that their children were doing well in reading achievement in the classroom, although they perceived their children as doing well in mathematics achievement. The parents of the retained kindergarten students were also less likely to agree that their child was doing well in reading achievement, while agreeing that their child was doing well in mathematics. The parents of students retained in kindergarten indicated 100 percent agreement that their child was attending a good elementary school, followed by 97 percent agreement of the parents of the comparison group students, 96 percent agreement of the "at risk" promoted students, and 93 percent agreement of the parents of the pre-first grade students. It was interesting to note that the parents of the "at risk" promoted students had the highest percent of agreement (96 percent) to the statement that their children like school, that their children are attending a good elementary school, and that the school is

meeting the needs of their children. The parents of the retained students also had a high percentage of agreement to those same statements. It appears the opinions of the parents relative to their children's academic performance are not born out by either the teachers' opinions (refer to Teacher Questionnaire, Appendix A) or by the results of the standardized achievement test scores.

Teacher Survey Data

Teacher Questionnaires were sent to the classroom teachers for each of the students in the four groups under investigation. Of the 312 questionnaires sent out, 295 were returned, for a return rate of 95 percent.

Tables 16 through 23 present the percent of teachers who were in agreement or disagreement with each of the eight survey statements. The percent of teachers who elected not to respond to a particular statement is indicated in the "no response" (NR) column.

Table 16. Teacher survey data for statement #1.*

*It is my opinion that the grade placement decision that was made for this student at the end of the kindergarten year was correct.

Student Group	% Agreed	% Disagreed	% NR
Retained students	91	2	7
Promoted students	37	39	24
Pre-first grade students	91	2	7
Comparison students	88	5	7

Table 17. Teacher survey data for statement #2.*

*This child is reading on grade level.

Student Group	% Agreed	% Disagreed	% NR
Retained students	57	41	2
Promoted students	66	32	2
Pre-first grade students	93	7	0
Comparison students	87	13	0

Table 18. Teacher survey data for statement #3.*

*This child is on grade level in math.

Student Group	% Agreed	% Disagreed	% NR
Retained students	72	24	4
Promoted students	76	23	1
Pre-first grade students	87	13	0
Comparison students	85	10	5

Table 19. Teacher survey data for statement #4.*

*This child likes school.

Student Group	% Agreed	% Disagreed	% NR
Retained students	93	3	2
Promoted students	83	12	5
Pre-first grade students	92	3	5
Comparison students	95	4	1

Table 20. Teacher survey data for statement #5.*

*This child makes an effort to do well in school.

Student Group	% Agreed	% Disagreed	% NR
Retained students	78	20	2
Promoted students	76	22	2
Pre-first grade students	88	12	0
Comparison students	89	10	1

Table 21. Teacher survey data for statement #6.*

*I enjoy having this child in my classroom.

Student Group	% Agreed	% Disagreed	% NR
Retained students	91	7	2
Promoted students	88	10	2
Pre-first grade students	95	3	2
Comparison students	95	3	2

Table 22. Teacher survey data for statement #7.*

*This child is cooperative and works well in the classroom.

Student Group	% Agreed	% Disagreed	% NR
Retained students	85	13	2
Promoted students	73	20	7
Pre-first grade students	90	8	2
Comparison students	92	7	1

Table 23. Teacher survey data for statement #8.*

*This child gets along well with other students and is well liked by other students in the classroom.

Student Group	% Agreed	% Disagreed	% NR
Retained students	85	11	4
Promoted students	73	23	4
Pre-first grade students	86	13	1
Comparison students	90	6	4

Teacher agreement to the eight statements on the Teacher Questionnaire ranged from a low of 37 percent agreement for the teachers of the students in Group 2 (At Risk Promoted) to statement 1 ("It is my opinion that the grade placement decision that was made for this student at the end of the kindergarten year was correct") to a high of 95 percent agreement for the teachers of the students in Group 4 (Comparison Group) on statement 4 ("This child likes school") and statement 6 ("I enjoy having this child in my classroom"). For a complete summary of the results of the Teacher Questionnaire, refer to Appendix F.

Only 37 percent of the teachers responded that they agreed with the promotion of the "at risk" kindergarten students to the first grade at the end of kindergarten. In general, the teachers' percent of agreement to every statement was lower for the "at risk" promoted students

than for the other student groups. Teachers' perceptions of the "at risk" students who were promoted to the first grade against the school's placement recommendations appeared to be somewhat less favorable than their perceptions of the other three groups of students, while more of the pre-first grade students and the comparison group students were reported as being on grade level in reading and mathematics, more cooperative and enjoyable to have in class, more likely to enjoy school, and more apt to make an effort to do their school work well. Fewer of the "at risk" promoted students were perceived by teachers as being on grade level in either reading or mathematics, as liking school, as making an effort to do well in school, as being enjoyable to have in class, as being cooperative and working well in the classroom, and as getting along well with and being liked by other students. The retained group of students was perceived by the teachers as being the lowest group in terms of reading and mathematics achievement, followed by the "at risk" promoted group, the pre-first grade group, and the comparison group, respectively. This opinion was substantiated by the results of the achievement testing. The teachers perceived the "at risk" promoted students as being the group of students who were least likely to get along well with other students and to be liked by the other students. This was also corroborated by the results of the Sociometric Questionnaire (Appendix

C) which found this group of students to be chosen less often than the other three groups. The highest percent of agreement to statement 6 ("I enjoy having this student in my classroom") was found for the students in the pre-first grade and comparison groups (95 percent agreement for each group). The comparison group of students was perceived as liking school the most, followed by the retained students, the pre-first grade students, and the "at risk" promoted students, respectively. It was interesting to note that while teachers perceived the retained students as liking school, they reported a lower percent of agreement relative to the statement that these students were making an effort to do well in school.

The parents of the "at risk" promoted students shared a much higher opinion relative to their children's progress in school and cooperation and relationships with other students than did the teachers of these students. The parents of the "at risk" promoted students and the retained students perceived 88 percent and 96 percent of their children, respectively, as doing well in mathematics, while the teachers only perceived 72 percent and 76 percent, respectively, of those students as being on grade level in mathematics. The parents of the "at risk" promoted students shared the opinion that 96 percent of their children like school, while the teachers agreed that only 83 percent of that group like school. It seems evident

that there is some disparity between the perceptions of the parents and the teachers relative to the reading and mathematics achievement and attitudes toward school for the group of students who were retained in kindergarten and the "at risk" students who were promoted to the first grade.

Sociometric Data

The results of the seven classroom sociograms are presented in Appendix D. The students from five first grade classrooms and two second grade classrooms participated in the Sociometric Questionnaire. There were 161 total students in the seven classrooms surveyed. Within these seven classrooms, 12 students (7.5%) represented Group 1 (retained students); eight (5%) represented Group 2 ("at risk" promoted students); 22 (13.7%) represented Group 3 (pre-first grade students); and 20 (12.4%) represented Group 4 (comparison students). Students were individually asked each of the four survey questions (see Appendix D) and their first, second, and third choices for each of the four questions were recorded. The number of times a student from one of the four groups under investigation was selected as either a first, second, or third choice on each of the four questions on the Sociometric Questionnaire was tallied.

Table 24 reflects the percentage of times that students from one of the groups under investigation were

selected as either a first, second, or third choice for each of the four questions on the Sociometric Questionnaire.

Table 24. Results of the sociometric survey.

Student Group	% of the Total Group	% of Times Selected
Retained students	7.5	6.4
Promoted students	5.0	6.2
Pre-first grade students	13.7	15.8
Comparison students	12.4	12.6
Other students	61.4	58.9

The "at risk" students who were retained in kindergarten (Group 1) represented 7.5 percent of the total group of students who participated in the questionnaire. These students were selected 6.4 percent of the time by their classmates. The "at risk" promoted students, representing 5.0 percent of the total group, were selected 6.2 percent of the time. The pre-first grade students, representing 13.7 percent of the total group, were selected 15.8 percent of the time and the comparison group of students, representing 12.4 percent of the total group, were selected 12.6 percent of the time. Students who did not belong to one of the four groups under investigation, representing 61.4 percent of the total group, were selected 58.9 percent of

the time. It appears that both the "at risk" promoted students and the pre-first grade students were selected more often than what would be expected based on the percentage of the total group they represented.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The problem of this study was to determine if there was a significant difference in the level of academic achievement assessed upon completion of grade one, among kindergarten students designated as being "at risk" for promotion to the first grade, when these "at risk" students were either retained in kindergarten, promoted to the first grade, or promoted to a transition pre-first grade program.

Kindergarten students who were designated as being "at risk" for promotion to the first grade at the end of the 1983-84, 1984-85, and 1985-86 school years in six elementary schools in two Northern Rocky Mountain communities comprised the sample of this study. The students were assigned, according to each school's policies regarding grade placement, to one of three grade level placements at the end of their first year in kindergarten: retention in kindergarten, placement in a pre-first grade transition program, or promotion to the first grade. These assignments were based on the results of either The Gesell School Readiness Test in District 2 or the Bracken Basic Concept

Scale in District 1, teacher observation, and parental consent or dissent relative to each school's placement recommendations.

A comparison group of students was selected from the kindergarten population of the two districts at the end of the same three school years to determine if there was a significant difference in the first grade achievement of the "at risk" students as compared with students who were not considered to be "at risk" and who were therefore designated as being eligible for promotion to the first grade immediately after their kindergarten year.

The effects of three independent variables, group assignment, gender, and chronological age, on the reading and mathematics achievement of these four groups of students were studied. The reading and mathematics achievement of each group was analyzed at the end of each group's first year in grade one to determine if there was a significant difference in the students' academic achievement attributable to the grade placement. Achievement was measured by either the Metropolitan Achievement Test in District 1 or the Iowa Tests of Basic Skills in District 2.

Surveys were sent to the parents of each of the 312 students who were members of one of the four groups under investigation to determine the percent of agreement to the eight statements on the Parent Questionnaire. Similar surveys were completed by teachers for each of the students

of the four groups under investigation to determine the percent of agreement to the eight statements on the Teacher Questionnaire. A Sociometric Questionnaire was also administered to the students in seven classrooms (five first grade and two second grade) whose group membership consisted of students from the student groups under investigation to determine if one group of students was selected more often on the four survey questions than any other group.

The data were analyzed using two-way analysis of variance to determine: if there was significant interaction between the independent variables, group assignment and gender, on the reading and mathematics achievement of the students in the four groups; if there was a significant difference in the reading and mathematics achievement of males and females; and if there was a significant difference in the reading and mathematics achievement among the four groups under investigation at the end of the first year in grade one. The Tukey Studentized Range Test was utilized as a planned multiple comparison technique to determine between which groups the significant differences occurred. The data were also analyzed using multiple regression to determine if a significant portion of the variability among the four groups could be accounted for by the independent variables, gender and chronological age.

The resulting hypotheses were tested at the .05 level of significance.

Conclusions

This investigation has provided evidence which supports the following conclusions, subject to the limitations of the study:

(1) "At risk" kindergarten students who are assigned to a pre-first grade transition program prior to their entrance into the regular first grade score significantly higher at the end of the first grade on a standardized test of reading and mathematics achievement than do those "at risk" kindergarten students who are retained in kindergarten or those "at risk" kindergarten students who are promoted to the first grade. Therefore, it would appear that the pre-first grade placement is effective in improving the reading and mathematics achievement of these students. These results support Kilby's (1984) findings regarding the greater reading achievement scores attained by the junior first grade students in Sioux Falls, South Dakota.

(2) Chronological age and gender had no significant effect on the variability of reading and mathematics achievement scores. Therefore, it appears that placement in a pre-first grade program is equally

effective in improving the academic achievement of both male and female students, and the superior test scores of the pre-first grade students were not a result of their slightly higher chronological age.

(3) Based on the percent of agreement of the parents who responded to the eight statements on the Parent Questionnaire, it appears there are some differences in the perceptions of the parents who represented the students from the four groups under investigation. The parents of the students who had attended the pre-first grade program had the highest percent of agreement to the statement that indicated they would once again support the same placement decision for their children. The parents of the "at risk" promoted students were the least likely to have agreed initially with the school's placement recommendation for their children at the end of the kindergarten year. However, they were the most likely to agree that today they would not be inclined to make the same decision again. The parents of both the retained students and the "at risk" promoted students did not perceive their children to be doing well in reading. However, they did see them as doing well in mathematics. The parents of the "at risk" promoted students believed their children to be doing better in reading and mathematics achievement than the parents

of all of the other three groups of students. (Refer to Appendix E for a summary of the results of the Parent Questionnaire.)

(4) Based on the percent of agreement of the teachers who responded to the eight statements on the Teacher Questionnaire, it appears there are also some slight differences in the perceptions of the teachers toward the students representing each of the four groups studied. The teachers surveyed were least likely to agree that the correct placement decision was made for the "at risk" promoted students at the end of their kindergarten year. The teachers were also least likely to perceive either the "at risk" promoted students or the retained students as being on grade level in reading or mathematics. This observation regarding the achievement of each of the student groups was consistent with the results of the standardized achievement testing. The lower test results achieved by the "at risk" promoted students, as well as the observations by the teachers that many of these students are having academic and behavioral difficulties in the classroom, substantiate the research by Dolan (1982). Dolan also found the academic performance of students whose parents refused transition placement to be inferior. The teachers also believed that the retained students and the "at

risk" promoted students were making less effort to do well in school. While teachers agreed they enjoyed having the pre-first grade students and the comparison group students in class, they reported they were less likely to enjoy having the "at risk" promoted students in class. They also perceived the "at risk" promoted students as being the least cooperative and the least likely to get along well with other students. These observations relative to the popularity of the "at risk" promoted students were also consistent with the results of the Sociometric Survey. (Refer to Appendix F for a summary of the results of the Teacher Questionnaire.)

(5) There is some disparity between the perceptions of teachers and parents relative to some of the corresponding statements on the parent and teacher questionnaires. While the parents of "at risk" promoted students saw their children as doing well in mathematics, as liking school, and as getting along well with other students, the teachers of this group of students were less likely to share these perceptions. In a similar vein, a greater percentage of the parents of the "at risk" promoted students saw their children as doing well in reading, while the teachers of these students indicated that a fewer number of them were actually working on grade level in this subject area.

(6) Based on the percentage of times that students were chosen as either a first, second, or third choice on the Sociometric Questionnaire, there appear to be slight differences in the popularity of students based upon the group the students represent. Both the "at risk" promoted students and the pre-first grade students were selected more often than what would be expected based on the percentage of the total group they represented.

Recommendations

The following recommendations are made based on the findings of this study:

The findings from this investigation indicate that "at risk" kindergarten students who have completed a pre-first grade transition program score significantly higher on a standardized test of reading and mathematics achievement than do "at risk" students who are retained in kindergarten or promoted to the first grade. A logical question to be asked is: Do these pre-first grade students maintain this academic advantage in succeeding years? Research needs to be conducted to determine if this academic advantage is maintained past the first grade level. Assessment of both parent and teacher attitudes toward the program should also be continued. It is also recommended that a self-concept and/or attitude survey be utilized to assess the

perceptions of these four groups of students to determine if there are differences among the groups in their perception of themselves and in their attitude toward school. Rather than gathering these data on a yearly basis, data could be collected at grades one, three, five, eight, and eleven.

Since there is some disparity between the perceptions of teachers and parents relative to the achievement and school behavior of some groups of students, school districts should endeavor to improve their communication with the parents of these students who are having academic and/or behavioral difficulties in order to develop a greater level of understanding.

A primary question which this study raises is whether the superior academic performance of the pre-first grade students is due to a difference in the type of curriculum the students receive in the pre-first grade year, or whether this superior performance is attributable to the difference in the type of student selected to attend the pre-first grade. The six elementary schools that participated in this study selected students for the pre-first grade program based on certain criteria. These students, for the most part, were selected because the results of both the screening and teacher observation judged them to be students without specific learning problems or social emotional disabilities. It was determined that these

students needed a transition year because of their developmental immaturity. This "profile" of the type of student who profits the most from a year in a pre-first grade program may be of paramount importance in the selection of students who will profit from a pre-first grade placement. School districts should carefully screen kindergarten students whom they consider to be "at risk" for promotion to the first grade to assist in the development of such a profile and to use this criteria carefully when making placement recommendations.

It appears that not all "at risk" students will profit from a year in a pre-first grade program. An analysis of individual test scores indicates that the test scores of a few students who completed a pre-first grade program were as low as the scores of those students who were retained in kindergarten. These students may have been incorrectly placed in the pre-first grade program. The students who were retained in kindergarten demonstrated the lowest test scores. These findings are in agreement with Jackson (1975), Niklason (1984), and Rose et al. (1983) who have suggested, after comprehensive reviews of the literature, that the practice of grade retention fails to indicate any significant benefits for the majority of students. School districts may wish to closely examine their retention policies to determine the efficacy of this practice. Students who are so low in achievement at the end of their

first year in kindergarten that they do not meet the established criteria for a pre-first grade placement might be students with needs better served by alternative curriculum adjustments.

In this study there was no appreciable difference in the class size among the groups being investigated. Therefore, the superior academic achievement of the pre-first grade students cannot be attributed to the benefit of smaller class size. Variability among teachers and the quality of instruction among the groups was not assessed. It does appear, however, that for students in a pre-first grade program, both the curriculum and instruction are intended to meet the academic and developmental needs of these students. The pre-first grade curriculum, if it is indeed developmentally appropriate, is designed to fit the needs of the student. The "at risk" students who were promoted to the first grade were more likely to be expected to fit the curriculum. The academic success of the students who participated in the pre-first grade programs investigated by this study may indeed be attributed to the type of student who was selected to participate in the program, as well as to the curriculum design which fit the curriculum to the child rather than the child to the curriculum.

The results of this study fail to support Gredler's (1984) contention, after a review of the available

literature, that the academic performance of transition-room students is lower than or, at best, equal to the achievement level of transition-room eligible students who are placed in regular classrooms. The inconsistencies in the findings of the research literature relative to the benefits of pre-first grade programs may be due to the fact that there has been some variability in the criteria used to determine which students would profit from placement in a pre-first grade program. Clearly, the majority of students who were selected to attend a pre-first grade by the six elementary schools that participated in this study were assigned on the basis of definite criteria which, when used to make student placement decisions, did result in improved academic achievement for these students. Based on the results of this study, school districts may wish to consider a pre-first grade option for certain "at risk" kindergarten students.

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APPENDICES

APPENDIX A

TEACHER QUESTIONNAIRE

TEACHER QUESTIONNAIRE

Teacher:_____

Grade:_____

Date:_____

Name of Student:_____

Retained In Kindergarten [ ]

Promoted to Pre-First Grade [ ]

At Risk but Promoted to First Grade [ ]

Not At Risk and Promoted to First Grade [ ]

Has this student ever been retained? [ ] Yes [ ] No

If yes, at what grade level? _____

Is this student enrolled in a special program?

[ ] Yes [ ] No

If yes, what is the title of that program? _____

_____

(1) It is my opinion that the grade placement decision that was made for this student at the end of the kindergarten year was correct.

[ ] Agree [ ] Disagree

If yes; why? If no, why not? _____

_____

_____

TEACHER QUESTIONNAIRE--cont'd.

(2) This child is reading on grade level.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(3) This child is on grade level in math.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(4) This child likes school.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(5) This child makes an effort to do well in school.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

TEACHER QUESTIONNAIRE--cont'd.

(6) I enjoy having this child in my classroom.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(7) This child is cooperative and works well in the classroom.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(8) This child gets along well with other students, and is well liked by other students in the classroom.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

APPENDIX B

PARENT QUESTIONNAIRE

PARENT QUESTIONNAIRE

Name of Student:_____

Grade Level of Student:_____

Teacher:_____

(1) I was in agreement with the school's placement recommendation for my child at the end of the first year of kindergarten.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(2) If I had to make the same decision again, I would support the same grade level placement recommendation for my child.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(3) My child is doing well in school in reading.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

PARENT QUESTIONNAIRE--cont'd.

(4) My child is doing well in school in math.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(5) My child likes school.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(6) My child is attending a good elementary school.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

(7) The elementary school is meeting the needs of my child.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

PARENT QUESTIONNAIRE--cont'd.

(8) My child gets along well with other children, and is well liked by the other students in his class.

[ ] Agree [ ] Disagree

If yes, why? If no, why not? _____

_____

_____

APPENDIX C

SOCIOMETRIC QUESTIONNAIRE

SOCIOMETRIC QUESTIONNAIRE

Student's Name:_____

Grade Level:_____

Teacher:_____

Group Designation:_____

(1) Who (from your classroom) do you like best to play with on the playground?

(a) _____

(b) Who else?_____

(c) And who else?_____

(2) Who would you like to have sitting next to you in the classroom?

(a) _____

(b) Who else?_____

(c) And who else?_____

(3) Who is your best friend in the classroom?

(a) _____

(b) Who do you like next best?_____

(c) And the next best?_____

SOCIOMETRIC QUESTIONNAIRE--cont'd.

(4) When working on a school assignment, who do you like to work with the most in the classroom?

(a) _____

(b) Who would you like to work with next?

_____

(c) And the next?_____

[Adapted from Northway and Weld, 1966; Montana State University Student Teaching Handbook, 1985.]

APPENDIX D

CLASSROOM SOCIOMETRIC QUESTIONNAIRE DATA

Table 25. Sociometric Questionnaire data: District #1, School #1, Grade 2.

Group*	Student	# of Times Chosen 1st	# of Times Chosen 2nd	# of Times Chosen 3rd
C	1	0	9	6
P	2	0	7	2
-	3	4	0	4
AR	4	1	6	3
-	5	1	1	3
C	6	0	2	5
-	7	3	8	3
-	8	2	7	8
P	9	1	0	1
C	10	0	1	0
-	11	3	0	1
-	12	0	2	0
-	13	0	6	6
P	14	4	5	2
-	15	5	3	4
-	16	9	9	2
AR	17	9	2	3
-	18	0	1	0
-	19	0	2	0
-	20	6	4	1
-	21	3	3	5
-	22	0	0	1
-	23	1	1	6
-	24	10	2	9
-	25	4	5	1

*CODE: C = Control; P = Pre-first; AR = At Risk; R = Retained; - = Not in study

Table 26. Sociometric Questionnaire data: District #1, School #2, Grade 1.

Group*	Student	# of Times Chosen 1st	# of Times Chosen 2nd	# of Times Chosen 3rd
P	1	0	1	0
-	2	4	12	2
- ab	3	1	2	1
- ab	4	0	2	5
-	5	6	4	1
-	6	7	5	3
-	7	3	1	1
-	8	2	0	3
-	9	13	6	5
AR	10	8	3	10
-	11	0	1	3
-	12	1	2	2
-	13	0	0	3
-	14	3	0	1
-	15	2	0	0
-	16	0	5	4
AR ab	17	1	4	8
-	18	1	3	4
- ab	19	1	2	2
-	20	10	6	7
P	21	1	5	1
P	22	0	0	0

*CODE: C = Control; P = Pre-first; AR = At Risk; R = Retained; - = Not in study; ab = Absent

Table 27. Sociometric Questionnaire data: District #2, School #3, Grade 1.

Group*	Student	# of Times Chosen 1st	# of Times Chosen 2nd	# of Times Chosen 3rd
-	1	5	4	5
-	2	6	9	12
R	3	0	1	3
-	4	1	2	6
-	5	15	12	6
-	6	2	3	2
- ab	7	2	3	4
-	8	2	1	0
-	9	0	4	3
R	10	0	4	7
-	11	3	7	3
C	12	9	7	2
P	13	2	1	4
-	14	3	3	2
-	15	2	3	2
C	16	8	0	1
P	17	7	5	0
-	18	15	12	4
-	19	4	9	6
P	20	0	5	2
C	21	0	1	1
-	22	0	2	4
-	23	0	0	2
-	24	0	0	1
-	25	4	0	0
-	26	6	0	5

*CODE: C = Control; P = Pre-first; R = Retained;
- = Not in study; ab = Absent

Table 28. Sociometric Questionnaire data: District #2, School #4, Grade 1.

Group*	Student	# of Times Chosen 1st	# of Times Chosen 2nd	# of Times Chosen 3rd
R	1	3	1	1
C	2	0	0	2
–	3	4	6	3
–	4	0	0	0
P	5	19	6	5
R	6	2	2	1
–	7	2	5	4
R	8	4	12	6
–	9	3	1	4
–	10	0	2	5
–	11	6	3	4
–	12	1	5	7
C	13	1	0	4
–	14	6	6	4
P	15	8	2	7
–	16	0	1	0
C ab	17	4	5	4
–	18	0	2	1
–	19	0	0	0

*CODE: C = Control; P = Pre-first; R = Retained;
– = Not in study; ab = Absent

Table 29. Sociometric Questionnaire data: District #2, School #5, Grade 1.

Group*	Student	# of Times Chosen 1st	# of Times Chosen 2nd	# of Times Chosen 3rd
-	1	10	7	12
-	2	0	1	1
P	3	4	2	0
AR	4	2	5	8
C	5	2	1	2
P	6	1	2	3
C	7	0	1	4
-	8	4	7	2
P	9	1	1	2
-	10	3	4	8
-	11	1	0	0
-	12	2	0	1
C	13	1	3	6
P	14	13	10	6
-	15	2	4	5
-	16	3	3	5
R	17	2	3	2
P	18	10	17	5
C	19	18	3	2

*CODE: C = Control; P = Pre-first; AR = At Risk;
R = Retained; - = Not in study

Table 30. Sociometric Questionnaire data: District #2, School #6, Grade 2.

Group*	Student	# of Times Chosen 1st	# of Times Chosen 2nd	# of Times Chosen 3rd
P	1	0	6	12
P	2	5	5	6
C	3	6	5	3
C	4	6	5	5
-	5	5	1	1
R	6	2	5	4
-	7	4	3	3
AR	8	5	1	5
AR	9	5	6	4
C	10	3	1	3
-	11	0	0	0
-	12	3	9	5
R	13	6	1	1
P	14	4	5	1
C	15	4	1	0
P	16	7	5	2
-	17	2	11	3
AR	18	1	2	0
-	19	0	0	0
R ab	20	2	4	7
-	21	12	4	14
-	22	5	3	3
R	23	2	5	0

*CODE: C = Control; P = Pre-first; AR = At Risk; R = Retained; - = Not in study; ab = Absent

Table 31. Sociometric Questionnaire data: District #2, School #7, Grade 1.

Group*	Student	# of Times Chosen 1st	# of Times Chosen 2nd	# of Times Chosen 3rd
-	1	12	7	8
-	2	4	5	2
-	3	3	11	2
R	4	0	7	2
-	5	10	11	11
-	6	1	0	1
-	7	1	0	2
-	8	1	0	0
- ab	9	2	1	3
C	10	11	6	9
-	11	0	0	0
-	12	4	3	1
-	14	13	13	4
P	15	6	5	5
-	16	0	3	2
-	17	5	1	3
- ab	18	0	0	1
-	19	1	5	4
P	20	4	1	3
C	21	3	4	6
-	22	2	1	4
R	23	0	2	2
C	24	1	4	8
-	25	2	2	3
-	26	6	2	3
-	27	3	1	0

*CODE: C = Control; P = Pre-first; R = Retained
- = Not in study; ab = Absent

APPENDIX E

PARENT QUESTIONNAIRE:

SUMMARY OF RESEARCH

PARENT QUESTIONNAIRE: SUMMARY OF RESEARCH

Table 32. Percent of parental agreement with each questionnaire statement.

Statement Number*	Group 1	Group 2	Group 3	Group 4
1	97	70	83	86
2	94	78	95	89
3	75	78	84	88
4	88	96	91	89
5	97	96	91	94
6	100	96	93	97
7	91	96	90	90
8	88	91	92	93

*Statements:

#1 I was in agreement with the school's placement recommendation for my child at the end of the first year of kindergarten.

#2 If I had to make the same decision again, I would support the same grade level placement recommendation for my child.

#3 My child is doing well in school in reading.

#4 My child is doing well in school in math.

#5 My child likes school.

#6 My child is attending a good elementary school.

#7 The elementary school is meeting the needs of my child.

#8 My child gets along well with other children, and is well liked by the other students in his/her class.

APPENDIX F

TEACHER QUESTIONNAIRE:

SUMMARY OF RESEARCH

TEACHER QUESTIONNAIRE: SUMMARY OF RESEARCH

Table 33. Percent of teacher agreement with each questionnaire statement.

Statement Number*	Group 1	Group 2	Group 3	Group 4
1	91	37	91	88
2	57	66	93	87
3	72	76	87	85
4	93	83	92	95
5	78	76	88	89
6	91	88	95	95
7	85	73	90	92
8	85	73	86	90

*Statements:

#1 It is my opinion that the grade placement decision that was made for this student at the end of the kindergarten year was correct.

#2 This child is reading on grade level.

#3 This child is on grade level in math.

#4 This child likes school.

#5 This child makes an effort to do well in school.

#6 I enjoy having this child in my classroom.

#7 This child is cooperative and works well in the classroom.

#8 This child gets along well with other students, and is well liked by other students in the classroom.