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**The effects of early grade retention on academic achievement at
subsequent grades**

McCorkle-Benz, Lori Kay, Ph.D.

The University of Arizona, 1994

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THE EFFECTS OF EARLY GRADE RETENTION
ON ACADEMIC ACHIEVEMENT AT SUBSEQUENT GRADES

by

Lori Kay McCorkle-Benz

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In Partial Fulfillment of the Requirements
For the Degree of
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Lori Kay McCoske-Benz

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ABSTRACT

Grade retention continues to be a common educational practice in the United States. Educators have typically used this procedure as a means of addressing academic deficits demonstrated by students. Although numerous research studies have been conducted to examine the efficacy of grade retention, conflicting results are reported at the first grade level. Few studies have addressed the issue of ethnicity and grade retention, although retainees are typically minority students. The purpose of this study was to examine the effects of first grade retention on second grade achievement in a predominately Hispanic population. In addition, this study examined the effects of retention based on gender.

Seventy-three students who were retained in the first grade served as the subjects in this study. Each subject was matched with two promoted control students based on reading achievement, math achievement, language achievement, ethnicity, sex, birthdate, socioeconomic status and primary language of the home. Academic achievement was compared at the end of the students' second grade years. Results indicated that the reading, language and math scores of the retained subjects and the reading, language and math scores of the nonretained counterparts

did not differ significantly. Differences of retention benefits based on ethnicity and gender were not evident.

The results were discussed in relation to results obtained from previous research studies. Investigation of alternative strategies to address student academic deficits was indicated.

CHAPTER 1

INTRODUCTION

Retention, as defined by Carstens (1985), is the practice of having a student repeat an entire course or grade that he or she has just completed. It is a practice which changes the social and academic environment for the child given placement with a younger peer group with lower academic expectations. Retention is a product of the organizational system of grouping by age and of the increasing demands of teacher accountability of student achievement.

According to Medway (1985) and Berliner and Casanova (1986), a marked increase in the rate of retention has been evident over the last two decades. Although there are no national statistics on grade retention, the Center for Policy Research in Education (1990) estimates that five to seven percent of public school children in the United States are retained yearly or approximately two children in every class of thirty.

Promotional gates and state minimal competency testing have, at least in part, been responsible for the gradual rise of the retention practice. These procedures have translated downward into fixed requirements for grade promotion (Shepard & Smith, 1988; Palardy, 1984; Adler,

1978; Piphon, 1978). If teachers are held accountable for children who score below norms on standardized achievement tests, the retention practice will naturally occur as an attempted remedial technique. Research on the benefits of retention across all grade levels has, however, generally yielded negative results (Jackson, 1975; Holmes & Matthews, 1984; Holmes, 1989). Despite these findings, educators continue to view retention as a viable solution for remediation of achievement deficits (Byrnes & Yamamoto, 1986; Byrnes, 1989). Doyle (1989) suggests that retention, although discredited through research findings, is still widely used because it is viewed as a "common sense" approach to dealing with the problems of below average student achievement and teacher accountability. In addition to the findings on the effects of retention on student achievement, other research results raise questions regarding the efficacy of retention. Holmes (1989), in his synthesis of sixty-three studies, reports overall negative effects of retention not only in the area of achievement, but also in student self-concept, attendance and personal adjustment. Several researchers report a significant relationship between grade retention rates and the percentage of dropouts. Specifically, Grissom and Shepard (1989), based on three large scale studies, conclude that students who repeat a year are twenty to thirty percent

more likely to drop out of school. Additionally, Haddad (1979) reports that retention is a costly educational procedure. Costs for the New York City Promotional Gates Program, for example, totaled in excess of \$40 million dollars (House, 1989).

When dealing with research results which focus on the effects of retention at the primary grades, the issue becomes more complex. Researchers agree that if retention is practiced, it is most productive in kindergarten, first grade or second grade (Jackson, 1975; Johnston, Markle & Nims, 1985). Indeed, retention typically occurs at the kindergarten or first grade level (Claflin, 1984; Hubbell, 1981; Niklason, 1984). Previous studies focusing specifically on the effects of first grade retention on subsequent achievement have yielded conflicting results. Whereas some researchers report positive gains in achievement for the first grade retainee (Van Zant, 1982; Juel & Leavell, 1988; Pomplun, 1988; Butler & Handley, 1990), others indicate a negative impact on subsequent achievement (Dobbs & Neville, 1967; Baenen, 1988). Still other researchers report no significant differences between achievement of first grade retainees and achievement of promoted first graders considered for retention (Johnson, Merrell & Stover, 1990; May & Welch, 1984). These conflicting results necessitate another study which

specifically examines the effects of first grade retention. Since student achievement is the main criterion used by educators in making retention decisions (Byrnes, 1989; Niklason, 1984; Rafoth & Carey, 1991) and is of such great concern in the evaluation of school effectiveness, it was selected in this study as the student outcome measure. Given that retainees are typically minority students (Cosden, Zimmer & Tuss, 1993; Casavantes, 1974; Peyton, 1968; Shuey, 1966) and given that few studies have been conducted which focus primarily on the effects of retention in minority populations, this factor will additionally be addressed.

Based on the above discussion, it is evident that retention continues to be a widespread educational practice. It is also evident that additional research is required which examines the efficacy of practicing retention as a means of addressing student academic deficits. As previous studies have revealed, retention is a costly educational procedure (Haddad, 1979) which often has adverse effects on the social-emotional adjustment of students (Holmes, 1989) and increases the likelihood of dropping out behavior (Grissom & Shepard, 1989). Given these findings, it is essential that the effects of retention on subsequent achievement be clarified. Is retention an effective method of remediating academic

deficits? If indeed it is, perhaps the use of retention is justifiable despite the negative aspects. If retention proves to be ineffective in addressing student academic delays, alternative educational strategies must be developed and implemented in its place. Since retention is practiced most frequently at the kindergarten and first grade levels (Claflin, 1984) and given that previous studies focusing on the first grade level yield conflicting results, it is especially imperative that further research be conducted to specifically address first grade retention and its effect on subsequent achievement. In addition, since retainees are typically minority students (Cosden et al., 1993) and since few studies have focused specifically on the effects of retention on minority populations, this factor will also be examined. The purpose of this study, therefore, is to examine the relationships between first grade retention and second grade achievement and how it relates to gender and ethnicity. This information, it is hoped, will assist school personnel in making informed decisions regarding the efficacy of retention by adding to the existing body of research and by clarifying the effects of retention at the first grade level. It is also hoped that the findings will have an impact on existing educational policies and will provide impetus in developing

and implementing alternative intervention strategies for addressing student achievement needs.

Definition of Terms

In order to comprehend the nature of this investigation, the following terms are defined:

1. Retention - The educational practice of having a student repeat an entire course or grade which he/she has just completed.

2. Academic Achievement - Level of mastery in the fundamental educational skills areas of reading, math and language.

3. Ethnicity - Belonging to a specific group of peoples whose members share the same culture, language or customs.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter contains a relevant review on the literature concerning the process of grade retention. Given the nature of this study, literature regarding elementary grade retention and its subsequent effect on achievement is the primary focus. Effectiveness of retention across different grade levels is emphasized.

Grade Retention: Historical Perspective

In 1985 Carstens defined grade retention as the practice of having a student repeat an entire course or grade that he or she had just completed. This practice, which dates back to the early 1800's, continues to be prevalent throughout the United States today. Medway (1985) has examined the retention process and identified historical as well as recent trends. A sharp decline in the retention practice was witnessed in the 1950's followed by a moderate decline in the 1960's. A gradual rise in retention occurred in the 1970's however. The 1980's also saw a continued rise in retention, especially in the elementary schools (Berliner & Casanova, 1986). Although national statistics are not accumulated on grade retention, it is estimated that five to seven percent of public school

students are retained in the United States annually (Center for Policy Research in Education, 1990). This percentage translates to over one million students who experience nonpromotion on an annual basis (Berliner, 1990). By the ninth grade approximately fifty percent of all students in the United States have flunked at least one grade or are no longer attending school (Center for Policy Research in Education, 1990). House (1989) estimates that between one-quarter and one-third of American students are retained at some point in their educational career. Frymier (1989) calculates a cost to taxpayers of over \$2 billion yearly to reteach students who were retained.

Given the widespread nature of this practice and the inherent costs involved, several researchers have focused on identifying common characteristics of students who are retained and on identifying the rationale behind implementation in order to gain a better understanding of this process. Based on numerous studies, retainees are typically male (Casavantes, 1974; Catherine, 1986; Knudsen & Thomas, 1965; Mantzicopoulos, Morrison, Hinshaw & Carte, 1989; Peyton, 1968; Shuey, 1966), minority students (Cosden, Zimmer & Tuss, 1993; Casavantes, 1974; Peyton, 1968; Shuey, 1966) and are of lower socioeconomic backgrounds (Mantzicopoulos et al., 1989; Abidin, Golladay & Howerton, 1971; Rau, 1974; Cosden et al., 1993). There

is additional evidence that retainees score lower on group tests of intelligence than promoted counterparts (Abidin et al., 1971; Aeibersold, 1971; Briggs, 1968; Dobbs & Neville, 1967; Kamii & Weikhart, 1963; Ogden, 1971). Abidin et al. (1971) also report a correlation between students who have been retained and who exhibit behavioral difficulties.

Caplan (1973) specifically notes that girls who are retained are discriminated from their like-achieving peers on the basis of aggressive and disruptive behavior. Other reported correlates of retained students include a high mobility rate (Snipes, 1965; Kapp, 1989), poor school attendance and serious health problems (Aeibersold, 1971), single parent households (Abidin et al., 1971) and younger chronological ages (Mantzicopoulos et al., 1989).

Retainees are typically kindergarten or first grade students (Claflin, 1984; Hubbell, 1981; Niklason, 1984).

The most widely reported reason for retaining a student is a deficit in academic achievement (Brown, 1985; Byrnes, 1989; Haack, 1985; Rafoth & Carey, 1991; Niklason, 1984). More specifically Brown (1985) and Rafoth and Carey (1991) report that standardized test scores, especially in the areas of reading and math, were the most commonly considered factors in the retention decision.

Several authors have developed decision-making models for assistance in dealing with the promotion-retention

dilemma (Brown, 1981; Lieberman, 1980; Light, 1977; Riffel & Switzer, 1986). Others describe specific programs and practices used in various schools and districts (Boyd, 1965; Calvano, 1981; Sandoval, 1984; Friedman & Sugarman, 1988; Valentine, 1985; Youngs, 1981).

Grade Retention and Academic Achievement

Research on primary grade retention and its subsequent effect on achievement dates back to the early 1900's. In 1936 Arthur obtained Kuhlmann-Binet scores and reading comprehension scores on sixty first grade repeaters. The subjects were placed in one of two settings; twenty-nine of them repeated in the ordinary way, while the others repeated in a transition class designed to eliminate failure feelings. The subjects' achievement at the end of the repeated year was compared to 418 nonrepeaters of the same mental age. Results indicate that the average repeater, regardless of the type of class, learned no more in two years than did the average nonrepeater in one year.

Farley (1936) obtained names of 400 elementary school students who were in danger of being retained. All of these students were subsequently given an intelligence test, a reading test and an arithmetic test. The children were then paired on the basis of intelligence test scores and chronological age; one student from each pair was randomly assigned to be promoted and the other was

retained. Second and third grade students who were promoted made significantly greater gains in reading than their retained peers. Significant differences were not found between the groups in the area of math achievement. Additionally, significant differences were not found between the retained and promoted students who were in the fourth and fifth grades.

Cook (1941) identified 700 students in grades first through seventh who were making poor academic progress. All students were randomly assigned to either a promoted group or a retained group. Retained students were then individually matched to the promoted students on the basis of chronological age, intelligence, achievement and personality. At the end of one semester, significant differences between the groups were not evident.

Kindergarten Retention - Many of the more recent studies on the effects of retention on achievement have focused on the kindergarten level. Troidl (1985) studied 174 kindergarten students who had been identified by their teachers as possible retainees. Sixty-nine of these students were actually retained. Scores on the California Achievement Test and district developed criterion referenced tests were examined during the repeated year. The retained group performed significantly better on the first grade criterion referenced tests in math and reading

than their promoted counterparts. Another study which yielded positive results for children retained in kindergarten was conducted by Butler and Handley (1990). They compared achievement and self-concept ratings of retained kindergarten (and first grade) students with those of students not retained. Butler and Handley report that students who were retained made more gains in achievement than the nonretained group. In addition, self-concept scores for children who repeated a grade were not significantly different from those of the promoted students.

In 1985 Sandoval and Fitzgerald studied high school students who had been retained in elementary school or who had participated in a transitional year between kindergarten and first grade. These subjects were matched with nonretained peers. Although the students who experienced a traditional retained year continued to academically lag behind the matched controls once in high school, those who had participated in the transitional program between kindergarten and first grade were found to be academically on par with their high school peers.

The majority of studies examining the effects of kindergarten retention (or transition room placement) on subsequent achievement report either negative findings or insignificant results. Raygor (1972) randomly assigned

subjects (from a pool of children recommended for retention in kindergarten) to attend either regular kindergarten or a transition class during the repeated year. The transition group received intensive instruction in language, concept development, and visual and auditory perception. These two retention groups were then compared to regularly promoted students and to students promoted with low prognosis for success. Pre-testing and post-testing was conducted using the Peabody Picture Vocabulary Test, the Bender-Gestalt and the Metropolitan Readiness Test. Additional follow-up testing, using the Stanford Achievement Test, was conducted at the end of the students' first, third and fourth grade years. The groups did not differ significantly in academic performance through the end of the third grade. The children who were in the potential failure group obtained significantly lower scores in reading than all other groups at the end of the fourth grade.

Shepard and Smith (1987) compared forty children retained in kindergarten to forty nonretained peers. The retained children were selected from schools that practiced kindergarten retention at a high rate (sixteen to twenty percent). The controls were selected from low retention rate schools (four percent or less) but which had similar socioeconomic and achievement levels to the high retention rate schools. The subjects were then individually matched

to the controls based on birthdate, sex, socioeconomic level, second language and beginning kindergarten readiness test scores. When both groups of children had completed the first grade, standardized reading scores from the Comprehensive Test of Basic Skills indicated that the retained group showed only one month advantage over their nonretained peers. On the outcome measures of math achievement, and on teacher ratings of math, reading, self-concept, social maturity and attention, the groups did not differ. Shepard and Smith also note that the parents of children who repeated kindergarten reported that their children's attitudes toward school were slightly poorer than those of equivalent groups of at-risk children. Based on this study and other reviewed research, Shepard and Smith (1989) concluded that kindergarten retention does not improve achievement and is ineffective regardless of whether children had been retained based on developmental immaturity or based on academic deficits. Shepard and Smith (1988) additionally note that whether delivered in a traditional mode or in a transition setting, kindergarten retention creates a social stigma and it feeds the escalation of inappropriate academic demands in the first grade.

Jones (1985) compared transition room participants with children who were recommended for a transition room

placement but who were promoted to the first grade. When subsequent achievement was examined, no difference was found between the two groups. Johnson, Merrell and Stover (1990) compared fifty-seven fourth graders retained in either kindergarten or first grade with those recommended for retention but who were not retained and with those demonstrating average academic progress. There were no significant differences between the achievement of the retained students and the achievement of the students who had been recommended for retention but who had been promoted. Both of these groups were performing at a lower level of achievement than the students who had demonstrated average academic progress in kindergarten and first grade. May and Welch (1984) also studied students retained in either kindergarten or the first grade. These students were compared with those who had been recommended for an extra year but who were promoted upon parental request. Stanford Achievement Test scores were gathered at the end of the students' second, fourth and sixth grade years. There were no significant differences in achievement between these two groups.

In 1984 Gredler reviewed six studies which had been conducted on the effectiveness of transition rooms. Based on this review, transition room children either do not perform as well or at best are equal in achievement levels

to students recommended for transition rooms but who were placed in regular classes.

First Grade Retention - Studies focusing on the effects of first grade retention on achievement have yielded somewhat inconclusive results. Positive effects of first grade retention are reported by Van Zant (1982), Juel and Leavell (1988), Pomplun (1988) and Butler and Handley (1990). Van Zant identified 197 elementary school children who had been retained during the 1979-1980 or 1980-1981 school years. These subjects were compared to nonretained counterparts of the same sex, school grade and class. Student scores from the Comprehensive Test of Basic Skills were analyzed. The students who were retained in the first grade during the 1980-1981 school year obtained significantly higher achievement test scores than their promoted peers. The students who were retained in the first grade during the 1979-1980 school year scored higher than their promoted counterparts in all achievement areas except reading. Reading and math achievement scores of third and fifth grade retainees were, however, significantly lower than those of the nonretained students.

Juel and Leavell (1988) compared reading skills of nine students retained in the first grade with nine similar children promoted to the second grade. They concluded that first grade retention can be beneficial if the retainees

start the repeated year with increased phonemic awareness (knowledge that the spoken word can be broken down into smaller units). Butler and Handley (1990) not only reported academic benefits for kindergarten retainees as discussed earlier, but also indicated that first grade retention can be beneficial. Achievement scores and self-concept ratings of students retained in kindergarten and the first grade were compared with scores of nonretained peers. Reported results suggest that the retained students made gains in achievement; self-concept scores of the two groups did not differ.

Students in first, second, third, fourth, seventh and eighth grades from a district in Florida participated in Pomplun's (1988) study for over two years. The students were grouped into primary (first and second grades), intermediate (third and fourth grades) or secondary (seventh and eighth grades) levels. At each level there were three groups of students; those who were retained after the first year of the study, those who were considered for retention in the spring of the first year of the study but who were subsequently promoted and those neither retained nor considered for retention. After the first year, the retained students were matched with the borderline students and the regular students on gender, grade, age, self-concept, and motivation. The groups were

then compared on measures of self-concept, motivation, teacher, student and parent attitudes, and reading, math and language achievement. Significant achievement gains were noted amongst the primary and intermediate retainees but not among the secondary students.

In contrast to the above findings, results of several first grade retention studies indicate a negative impact on subsequent achievement. Dobbs and Neville (1967) matched thirty pairs of children on the basis of race, sex, socioeconomic status, chronological age, mental age and reading achievement. Each matched pair included a child who had been retained in the first grade and a second grader never retained. Comparisons of Metropolitan Achievement Test reading scores one and two years later indicated higher reading achievement gains for the promoted students, although the retained group also made reading gains. Both of the groups continued to lag behind classmates of the same grade level.

As reviewed earlier, Johnson, Merrell and Stover (1990) and May and Welch (1984) report no significant differences between achievement of students retained in kindergarten or first grade and achievement of students considered for retention, but who were instead promoted.

Retention at Subsequent Grade Levels - Additional studies which examine retention during the elementary

school years generally indicate that repeated year gains are insignificant or, in some cases, the repeated year yields negative results. Rose, Medway, Cantrell and Marus (1983) discovered that twenty to thirty-five percent of retained subjects learned more material during the second year in the same grade than they had learned the first time. However, forty percent of the retained students actually learned less during the year in which they repeated. Briggs (1968) gathered descriptive information regarding twenty-nine fifth and sixth grade boys who had failed two years in elementary school. They were compared with thirty randomly selected, regularly promoted male peers. The retained students continued to function significantly below grade level norms. Briggs concludes that two years of retention is not a successful method of bringing students' achievement up to expected levels. Similar results were obtained by Ogden (1971). The academic performances of one hundred high school students who had been retained once in elementary school were investigated. These students were compared with four groups of retained and promoted students with various academic histories. Fifty percent of the retained students continued to exhibit difficulty in high school. The practice of retention failed to remediate the academic deficits.

In 1973 Kraus discovered that of thirty-three children retained in the fifth or sixth grades, twenty-four made no significant change in their rate of progress during the repeated year. Of the remaining children, seven made slight gains but only two made more progress than prior to retention. "Slow-learning" children who were required to repeat a grade and "slow-learning" children who were promoted were studied by Coffield and Blommers (1956). Both groups ultimately performed at the same achievement level when their performance was measured in the seventh grade, even though the retained students had spent an added year in the educational system.

Ebey (1982) compared the achievement of forty-nine fifth graders who had been retained once in kindergarten, first, second or third grade with the achievement of two hundred low achieving fifth graders never retained. Scores on the Metropolitan Achievement Test subtests of Word Analysis, Total Reading and Total Math were obtained. In the area of reading, the retained group scored lower than the promoted group. There was no difference between the two groups in the area of math. Catherine (1986) also concluded that elementary grade retention fails to remediate academic deficits. One hundred students retained once in grades kindergarten through fourth were studied. Subsequent achievement scores of these students continued

to lag behind expected levels. Retention did not appear to improve longitudinal reading or math achievement in this study.

Eighty-five sixth graders who had been retained once in the first or second grades were compared with a random sample of regularly promoted children (Abidin, Golladay & Howerton, 1971). The promoted children had scored below the twenty-fifth percentile on the Metropolitan Readiness Test while in the first grade. Achievement testing placed the retained group just below grade level and the promoted group at or slightly above grade level by the sixth grade.

In 1981 New York City launched an educational reform plan known as the Promotional Gates program. Students who had failed to meet the established minimal academic performance at grades four and seven, the two Gates checkpoints, were identified. According to Frank (1984), these students were in danger of being retained and were offered a six week special summer school program. If these students continued to function more than one grade level below on the district reading test at the end of the fourth grade, or more than one and one-half years below grade level at the seventh grade, they were held back with few exceptions (House, 1989). The retained students were subsequently placed in special classes of no more than twenty students and were taught by specially trained

teachers during the repeated year. An initial follow-up by Frank (1984) indicated that the program proved effective; a greater percentage of children were able to meet promotional criteria by the second year of the program. Similarly, Gampert (1989) reported that the Gates students made significant gains during the repeated year, especially in the area of reading achievement. Gampert also indicates, however, that after the repeated year, the students failed to continue academic progression at an adequate rate. The longitudinal effects of the Gates program were summarized by House (1989). When subsequent achievement scores were analyzed, there were no significant differences between the Gates students who had repeated a year and those students in other special programs who were not held back. House also notes that approximately 25 thousand students were retained as a result of the Promotional Gates program costing New York City in excess of \$40 million.

Few studies report positive retention outcomes at the elementary level. Those that do are summarized subsequently. Scott and Ames (1969) identified twenty-seven children who were retained due to immaturity. Grades from the end of the previous year were compared with grades obtained in February of the retained year. Grades improved markedly for all students. A comparison group was not used

in this study. Klauber (1971) examined learning rates of one hundred forty-one children who failed the fourth grade but successfully completed the retained year and their subsequent fifth grade year. These students were matched with students who had never been retained. During the students' initial fourth grade year, a significant difference existed between those who were eventually retained and those who were promoted when examining scores on the ten subtests of the Iowa Tests of Basic Skills (ITBS). During the repeated year the retained students made significant gains in their rate of learning on seven of the ten subtests of the ITBS. By the retained group's fifth grade year they no longer differed from the matched group on six achievement areas on the ITBS. Oldham (1983) identified ninety-eight high school students who had been retained one or more times in the primary grades, and matched them to nonretained peers. Students of average academic ability who had been retained achieved significantly higher in math throughout their school careers. No difference was noted in the area of reading. Finally, Stringer (1960) conducted a follow-up study on forty-eight children who had been retained. Academic progress was monitored from the year prior to retention through the year following retention. Stanford Achievement Test scores were used to measure progress. The retained

students as a whole made more progress during the repeated year than had been made during the previous year. Continued gains were noted during the following year. About one-third of the retained children, however, failed to benefit from the procedure.

Retention Effectiveness Based on Grade Level - Several researchers have concluded that the effectiveness of grade retention varies based on the grade in which a student is retained. Reinherz and Griffin (1970) studied fifty-seven boys who had repeated the first, second or third grade. More than eighty percent of the first grade students achieved at a "satisfactory" level during the repeated year as compared to less than fifty percent of the second and third grade students. Elligett and Tocco (1983) report similar results in examining the promotion-retention policies in Florida. Based on their findings, children retained in the first grade made greater gains in reading and math than did older retained children. Another study focusing on retention in Florida was conducted by Leggett (1983). Students who were retained in the school district of study during the 1978-1979 school year made some gains but did not bring achievement scores up to match county grade norms. Leggett also reports that those students who are retained in the first grade or third grade have the

strongest probability of benefitting from the repeated year.

Walker and Madhere (1987) collected data on over 1200 students in an urban school district. These students had experienced multiple retentions and still were not functioning at grade level. Analysis of the data indicated that only first and second grade retainees showed significant improvement in reading. Pomplun's (1988) study, summarized earlier in this review, also indicates different results of retention dependent on grade level. Students retained at the primary level (first or second grade) showed increases in all achievement areas, a stable self-concept and a temporary increase in motivation at the beginning of the retained years. Students retained at the intermediate level (third or fourth grade) demonstrated an increase in achievement and motivation but a decrease in self-concept. Students retained at the secondary level (seventh or eighth grade) displayed no significant gains in achievement and insignificant decreases in self-concept and motivation. Based on his research, Pomplun concludes that the efficacy of retention decreases as the grade level increases.

Powell (1982) identified students who had been retained in an urban school district in Texas during the 1977-1978, 1978-1979 or 1979-1980 school years. Those

students with scores available on norm-referenced standardized tests were used in the study. Powell reports that grade retention did not consistently enhance achievement levels relative to national norm samples on standardized tests. A regression analysis revealed that grade level is a significant predictor of retention success; the earlier the student is retained, the more positive the results.

Retention of Minority Students - Reynolds (1992) monitored the progress of 1255 students, mostly low income black children, who enrolled in one of four government funded kindergarten programs in the Chicago Public Schools in 1985. Of this sample, 20.4 percent were retained a year between kindergarten and the third grade. Although a longitudinal analysis indicated that retention had mixed effects on children's school adjustment at the fourth grade level, substantially negative effects were evident in math and reading achievement.

Roach (1983) examined the effects of elementary school retention on minority students. Retained subjects were matched with promoted peers by reading scores. Roach indicates that the promoted group as a whole obtained higher grade point averages and had better school attendance than their retained counterparts. In addition,

social adjustment was better for the promoted students during the year of the promotion-retention decision.

Longitudinal Effects of Retention - Several more recent studies reveal that the initial benefits of retention dissipate as the student grows older and advances through the educational system. Peterson, DeGracie and Ayabe (1987) identified students who were retained in the first, second or third grades and selected a matched comparison group of nonretainees. Students were individually matched on sex, ethnicity, chronological age and reading, language, and math scores on the California Achievement Test. The retained students significantly improved their relative class standing by the end of the retained year and in some cases they maintained this advantage over a two year period. After three years, however, there were no differences evident between the retained and the promoted students. Gampert (1989) and House (1989) in their longitudinal studies of the New York City Promotional Gates Program reported similar findings. Although the majority of retained students made significant gains during the repeated year, especially in the area of reading, adequate progress did not continue in subsequent years and, several years later, the retained students' scores were not significantly different from those in other special programs who were not held back. Billman (1988),

in examining effects of kindergarten retention, reports that differences in achievement scores of retained students and promoted students recommended for retention usually decrease by the age of thirteen and are nonexistent by the age of seventeen.

Meta-Analyses - As evidenced by the studies reviewed thus far, there exists a wide body of literature regarding the effects of grade retention. Several authors have reviewed this data in order to draw overall conclusions. In 1975 Jackson conducted one of the most thorough reviews of the retention literature up until that time. He reviewed forty-four studies that had been published between the years of 1929 and 1974. In the course of his review Jackson identified three types of analytical research designs that prevailed in the retention literature. The most common type of design compared the outcomes of students retained with the outcomes of students promoted. Jackson concluded that this design is biased toward the finding that grade promotion has more benefits than grade retention since it compares retained students who are having problems with promoted students whose difficulties are typically not as severe. Most of the researchers who used this design, according to Jackson, compared students who were matched on one to four of the following characteristics; grade level, sex, chronological age,

mental age, intelligence, grades, achievement test scores, adjustment indices and socioeconomic status. The second type of design compares the condition of retained students after retention with their condition prior to retention. This design is biased toward the finding that pupils benefit from grade retention given the lack of control for improvement resulting from factors other than the retention experience itself. Finally, Jackson identified a third type of design; that which compares students with difficulties who have been randomly assigned to be promoted to students with difficulties who have been randomly assigned to be retained. Although this experimental design offers the best basis from which to make firm conclusions, only three studies (all of which were conducted prior to 1942) were reported by Jackson which utilized this type of design. The results of these studies suggest that grade retention is no more productive than promotion; Jackson recommends further experimental design research for substantiation.

Carstens (1985) reviewed the retention literature and, like Jackson, discussed the design problems and outcome bias evident in the studies that she examined. She also identified an additional research design which was used by Raygor (1972). This methodology involves the comparison of matched retained and promoted students in a particular

grade. (As stated earlier in this review, Raygor randomly assigned students recommended for retention at the end of their kindergarten year to attend either a transition class or a traditional kindergarten class during the repeated year. These students were later compared to regularly promoted students and to students promoted with low prognosis for success.) Carstens concluded that retention research generally fails to meet the standards of control necessary in order to make definitive recommendations regarding the retention-promotion controversy.

Holmes (1983) conducted an analysis of eight different studies in order to assess the effects of retention on reading achievement, math achievement and language arts achievement. Seven of the studies were used to analyze the reading achievement of retained versus promoted students. A difference of .38 standard deviation units was evident in favor of the promoted students in the area of reading. The math achievement analysis, using six of the studies, indicated a difference of .45 standard deviation units in favor of the promoted group. Finally, language arts achievement results, using five of the studies, indicated a difference of .36 standard deviation units in favor of the promoted students.

In 1984 Holmes and Matthews conducted a meta-analysis using the data from forty-four studies on retention. The

studies used presented the results of original research on the effects of retention in kindergarten through high school, contained sufficient information to calculate an effect size, and compared a group of retained students to a group of promoted students. Data from a total of 11,132 students were mathematically integrated. Based on the meta-analysis a grand mean effect size of $-.37$ was obtained indicating that, on the average, promoted children scored $.37$ standard deviation units higher on various outcome measures. These measures included academic achievement, personal adjustment, attitude toward school, behavior and attendance. In all cases, outcomes for the promoted students were more positive than outcomes for the retained students. This meta-analysis was updated in 1989 by Holmes. Sixty-three studies (forty-four of which had been included in the 1984 meta-analysis) were included. Of the sixty-three studies, fifty-four indicated overall negative effects of retention in the areas of achievement, self-concept, school attendance and personal adjustment. For the majority of these studies with negative effects, early grade retention was not less harmful than when it occurred in later grades. Nine of the sixty-three studies yielded positive results of grade retention. According to Holmes, these nine studies compared promotion to retention which incorporated intensive remediation. In addition, the

retained students in these studies appear to have been an unusually capable group. The students were generally characterized as middle to upper middle class, average intellectually, and achieving less than .75 standard deviation below the norm. Few minority students were included in this group of retainees and most were from a suburban setting. These studies did not typically contain follow-up data for more than one year. Holmes concludes by stating that when all available longitudinal data were analyzed, the apparent same-grade benefit of retention disappeared over time. Retained children were no better off as compared to their younger at-risk controls who went immediately on to the next grade.

Other less extensive reviews focusing on the retention issue have been conducted. Most of these authors conclude that either retained students achieve less as a group than promoted students or that there are no clear achievement gains for retained students (Bossing & Brien, 1980; Dawson & Rafoth, 1990; Heffernan, 1952; Humphreys, 1965; Josephine, 1962; Meussen, 1954; Nason, 1991; Norton, 1983; Otto, 1951; Reiter, 1973; Shepard & Smith, 1986; Walker, 1984; Walker, 1973). Additionally, most of these authors report (along with Boyle, 1962; Goodlad, 1954) that retention has a negative impact on the student's self-concept and personal adjustment. Norton (1983) states that

retention also tends to promote discipline problems. Dawson and Rafoth (1990) conclude that the practice of retention fails to improve a student's attitude toward school whereas Reiter (1973) reports that retention may actually damage student motivation. Based on their reviews, Goodlad (1952), Heffernan (1952), Josephine (1962) and Otto (1951) report that retention does not serve to reduce the range of student abilities with which a teacher must deal with at any given grade level.

Social-Emotional Adjustment - While the previously reviewed studies have focused primarily on the academic achievement of retained and promoted students, other researchers have specifically looked at retention effects in the areas of student personality and emotional and social development. Because these research findings do not specifically relate to the overall direction of this inquiry, results are briefly summarized. Several researchers report that there are no significant differences between retained and promoted children in the area of social-emotional adjustment (Chansky, 1964; Ammons, 1976; Finlayson, 1977). Other researchers suggest that the retention practice results in a negative impact on student social-emotional adjustment (Henderson & Long, 1971; Godfrey, 1972; White & Howard, 1973; Byrnes, 1989). Meta-analyses of previous research studies (Holmes, 1989)

indicate that retained students are generally rated more poorly on measures of personal and social adjustment than matched non-retained peers.

Drop Out Behavior - In addition to the effects of retention on achievement and social-emotional adjustment, several researchers have focused on the effects of retention on student dropout rates. Kitch (1952) and Thomas and Knudsen (1965) reviewed the early literature which analyzed the relationship of the retention practice and dropout behavior. Kitch reported that the evidence points to a strong positive relationship between nonpromotion and dropping out. Thomas and Knudsen state that nonpromotion in the early school years leads to later withdrawal from the educational system prior to graduation. They also report that although retention does not directly cause a student to leave school early, the effects of nonpromotion on the student's family and peer group relations result in pressures that discourage continued education.

In 1964 Knudsen investigated the social and familial relationships of high school dropouts in a predominately white school population. Of those students who did not repeat an elementary grade, 6.7 percent withdrew from school prior to graduation. Of those students who had repeated a grade sometime during elementary school, 27.2

percent withdrew prior to graduation. Lloyd (1971) reported that the retention rate, even as early as the third grade, is a significant predictor of later dropout.

Craig (1978) examined the retention policies of North Carolina public schools and discovered that nonpromotion is significantly related to withdrawals. Systems with high nonpromotion rates also have high withdrawal rates. Similar conclusions were made by Haddad (1979) when cross culturally examining the relationship between retention policies and frequency of dropping out. Haddad reported that children who are retained do not master school curriculum and leave school prematurely. He also notes that dropouts represent a lost investment of over \$1 billion annually.

Floyd (1982) additionally reports a significant relationship between grade retention rates and the percentage of dropouts in grades nine through twelve. Hill (1989) further indicates that children who have been retained, even as early as kindergarten or the first grade, are at risk of dropping out later on regardless of their socioeconomic status.

Grissom and Shepard (1989) used a causal modeling technique in order to assess the effect of repeating a grade on subsequent dropout behavior while controlling for relevant background factors. Specifically, this analysis

examined the question of whether retention itself increases the risk of dropping out or whether poor achievement, which leads to retention, is actually the causal factor. Three large scale studies were conducted, each involving from 20,000 to 80,000 students. As stated in previous studies, when examining high school dropouts versus those that graduate, it is always reported that a larger proportion of the dropouts have repeated a grade at some time in their educational career. When student achievement, background and sex are controlled, as was done in this analysis, there remains a significant effect for grade retention on dropping out. The strength of this effect varies across school systems. Grissom and Shepard further state that, although the causal modeling technique cannot offer unequivocal findings, the consistency of results across many analyses lends strong support to the conclusion that retention adds to the risk of dropping out. Students who repeated a year were twenty to thirty percent more likely to drop out of school.

Based on a report filed by the Association of California Urban School Districts (1985) students who drop out are five times as likely to have repeated a grade during their educational career than students who graduate. It is also noted that students who repeat two grades during

their education have a probability of dropping out of nearly one hundred percent.

Alternative Strategies and Current Practices

In addition to research focusing on the effects of retention, several authors have studied alternative strategies to the retention practice. Norton (1983) recommends determination of the causal factors of learning difficulties and development of remediation strategies specific to the problem. Success strategies or planned programming that allows each pupil to gain a personal satisfaction in learning should also be implemented. Finally, Norton suggests an analysis of organizational and provisional strategies. Nongrading organization can serve the purpose of placing an emphasis on individualization while de-emphasizing the negative aspects of grade retention. In 1990 Norton again stressed the importance of remediation programs, implementation of success strategies, and reorganization of the classroom. He additionally emphasized the need to educate educators on the retention literature.

Walker (1984), Cooke and Stammer (1985) and Frick (1986) suggest provision of flexible programming to account for individual needs and differences of students in place of the retention practice. Continuous progress programs and ungraded classes can be utilized in order to provide

children with curriculum and timetables designed to meet their individual needs.

Overman (1986) offers alternative placement options rather than traditional retention when achievement deficits are evident. Suggestions include promotion accompanied with remedial instruction on unmastered skills, placement in a transition program, retention accompanied with remediation or partial promotion with a summer school requirement. If a child is retained, Overman recommends repetition of the year with a different teacher. Shepard and Smith (1989), based on their research and review, strongly recommend promotion plus remediation as the most effective intervention strategy for achievement deficits.

In 1990 Carter developed and implemented a diagnostic-prescriptive intervention program aimed at identifying and meeting first grade student needs early in the school year. Teachers at two elementary schools were assisted in early identification of students who were at risk for retention. Psycho-educational evaluations were conducted and individual education plans were developed for these students. A teacher inservice was offered and monthly teacher meetings were held in order to assist in development and implementation of intervention strategies. Parents of the students were contacted and met as a group. The retention rate of students in the school dropped from

thirteen percent to less than one percent. Most of the students improved their skills. Those students who did not improve and who apparently had more severe learning problems were referred for more intensive intervention.

Berliner and Casanova (1986) suggest a change in instructional method when a child's academic progress is of concern. They note that grade levels are artificial divisions that do not necessarily coincide with a child's development. Special programs can be designed and implemented at any grade level thus making retention an unnecessary practice.

Despite the many research articles which indicate that nonpromotion does not enhance achievement levels, and often can result in social-emotional difficulties and dropout behavior, retention continues to be practiced and viewed as a viable educational alternative. Based on 898 elementary school teachers' surveys, Niklason (1984) reports that five times as many teachers favor as oppose the practice of retention. In 1986 Byrnes and Yamamoto surveyed parents, teachers and principals to determine their views on grade repetition. Results indicated that the practice was strongly recommended by school personnel and generally supported by parents. In 1989 Byrnes again examined the opinions of parents, teachers and principals regarding the retention practice. A total of 1063 parent surveys, 145

teacher surveys and 35 principal surveys were accumulated. Based on their responses, the wide majority of each group supported retention for students not meeting grade requirements. When teachers were asked if they thought that retaining a particular student was effective, eighty-nine percent responded affirmatively. Despite findings that retention was not beneficial for sixty-five first, second and third grade children, Chase (1968) indicates that the involved teachers rated the retention experience as beneficial for seventy-five percent of the children.

As reported by Graham (1982) and Smith and Shepard (1988), teacher beliefs and practices are closely related. They typically exercise decision-making based on interpretations of their own experiences. If teachers believe that retention is beneficial, they will continue to practice it. Although discredited through research, Doyle (1989) suggests that retention is still used as a "common sense" solution. Hannel (1986) states that the philosophy of the school principal also plays a critical role in the retention-promotion decision. Schools with principals who support retention retain significantly more students than schools with principals opposed to retention.

According to Schwager, Mitchell, Mitchell and Hecht (1992), school district retention policies do not directly control staff behavior in the retention decision. In a

study involving 183 California school districts, it was determined that retention policies provide signals that are interpreted through various organizational and personal belief systems. Therefore, identical policies lead to different retention decisions.

Smith (1989) interviewed forty teachers and observed them in the classroom setting in order to examine their beliefs regarding retention. Based on their responses the predominant view of teachers is that retention benefits the student. Those teachers who believe that school readiness is a physiological process are most likely to practice retention at a high rate. Even those teachers who do not hold the "physiological process" belief, and who retain few children, continue to endorse retention as an effective remedial technique. Smith further states that teachers appear to rely on their own practical knowledge. Either they are unaware of the research findings or the results do not seem applicable to their particular circumstance. Smith and Shepard (1987) additionally point out that teachers do not often have the opportunity to observe retained students as they progress further through the educational system. Instead, retention opinions are formed based on one year observations during which time a child may demonstrate temporary improvement. Rarely are teachers aware of their retained students ten years later when

achievement is still lagging and dropping out behavior is imminent.

In an attempt to increase teacher awareness, House (1989) suggests that teachers conduct their own research and examine the longitudinal effects of retention on those who they retain. Since this is unlikely to occur, House secondarily recommends that each school district be required to monitor the progress of their retained students and make this specific data available to teachers, administrators and parents.

Synthesis

Based on this review, several conclusions are evident and are summarized below:

1. The majority of studies reveal overall negative effects of retention on student achievement. Meta-analyses of previous research studies (Holmes, 1989) suggest that retention generally yields negative results on the outcome measure of student achievement. In studies which report positive outcomes of retention, the reported benefits appear to be of a short term nature. Differences in the achievement of retained students and matched nonretained controls diminish in later grades.

2. Students who are retained have a greater probability of dropping out of school. Grissom and Shepard (1989) report that students who repeat a grade are twenty

to thirty percent more likely to drop out prior to graduation.

3. Retention may have a negative impact on students' social-emotional adjustment. Meta-analyses of previous research studies (Holmes, 1989) indicate that retained students are generally rated more poorly on measures of personal and social adjustment than matched nonretained controls. Other studies (Byrnes, 1989) indicate that the retained student views himself/herself as a failure.

4. Despite research findings, retention continues to be practiced widely in the educational setting with an annual cost to school districts of approximately \$10 billion. Although there are no national statistics on grade retention, it is estimated that 2.4 million students are retained annually in the United States (Shepard & Smith, 1986).

5. Retention is practiced most frequently at the kindergarten and first grade levels. Some researchers state that retention in the early grades is indeed the most effective (Elligett & Tocco, 1983). Studies examining the effects of retention at the first grade level, however, yield conflicting results.

6. Retainees are typically minority students (Cosden et al., 1993; Casavantes, 1974) yet few studies have examined the relationship between retention and ethnicity.

7. Educators continue to favor retention as a viable option in addressing student achievement deficits regardless of research results. Smith and Shepard (1987) suggest that either teachers are unaware of research findings or the results do not seem to be applicable to their particular situation. In addition, parents are typically supportive of retention decisions (Byrnes & Yamamoto, 1986).

8. Although alternative strategies, such as promotion with remedial instruction (Overman, 1986) and continuous progress/flexible programming models (Walker, 1984; Cooke & Stammer, 1985; Frick, 1986), have been recommended, they have been embraced by few school districts.

Statement of the Problem

Review of the relevant literature suggests that grade retention does not generally have a positive impact on academic achievement. Indeed some researchers have concluded that retained children actually perform poorer than if they had been promoted (Holmes, 1989). When specifically examining the literature on the effects of first grade retention on student achievement, the results are more varied. Some studies indicate that retention of first grade students has a positive impact on subsequent achievement (Butler & Handley, 1990; Pomplun, 1988; Van Zant, 1982). Other studies indicate that first grade

retention does not academically benefit students (Baenen, 1988; Dobbs & Neville, 1967; Johnson, Merrell & Stover, 1990). Several researchers conclude that first grade retention carries greater benefits than retention at later grades (Elligett & Tocco, 1983; Pomplun, 1988; Reinherz & Griffin, 1970).

Despite research findings, retention rates are currently as high as they were in the nineteenth century. Unofficial statistics indicate a six percent annual rate for retention, which eventually translates into a cumulative nonpromotion rate of greater than fifty percent (Shepard & Smith, 1990). By grade nine, approximately one-half of all students in the United States have flunked a minimum of one grade or are no longer in school. Shepard and Smith (1990) suggest that retention practices continue because parents and teachers do not conduct controlled experiments or longitudinal studies, without which retention appears to be successful. Secondly, school personnel face political pressures to maintain "high" educational standards. Retention is often viewed as concrete verification of high expectations and it requires little creativity or time to implement.

This study was conducted to add further information to the body of retention literature and to answer specific questions regarding the efficacy of first grade retention

in the district of study. Do students significantly improve in math, reading, and language achievement after first grade retention? Do students of different ethnic backgrounds differ in achievement gains following first grade retention? Additionally, do male and female students differ in achievement gains following first grade retention? These issues were the foci of this study.

CHAPTER 3

METHOD

This chapter describes the methodology used to examine the hypothesized relationships and is divided into the following sections: Sample and Sampling Procedures, Instrumentation, Testing Procedures, Hypotheses and Data Analysis Procedures.

Sample and Sampling Procedures

Experimental Group - Seventy-three elementary children from eleven elementary schools in a school district in the Southwestern United States participated in this study. The school district in which all participants attended is characterized by a predominately Hispanic, low socioeconomic status and highly mobile population. The experimental group consisted of English-dominant students in the district who repeated the first grade during the 1986-1987, 1987-1988, 1988-1989 or 1989-1990 school years, and who continued in the district through their second grade year. The school district in which all subjects attended utilized an informal retention review team at its eleven elementary schools for making retention-promotion decisions. The team at each school was primarily comprised of the school principal, regular classroom teachers,

special education teachers, a speech-language pathologist and a school psychologist. The team participants varied slightly from school to school. Students being considered for retention were referred to the review team by the classroom teacher and a deficit in academic work was the primary factor in the teacher's referral decision. The main criterion for referral was significantly below average achievement at the end of the first grade primarily in reading, math or language. Additional variables considered in the retention-promotion decision included the student's record of attendance, level of physical and social maturity, and chronological age.

During the target years, a total of two hundred twenty-two students in the school district were retained in the first grade. Their names and the names of the schools where they were retained were obtained through the Office of Elementary Curriculum and Instruction of the participating school district. A two-stage sampling procedure was used to identify experimental and control group subjects. The first stage consisted of an analysis of the first grade retention rates at the eleven elementary schools in the district of study. Six schools were identified as high retaining schools, accounting for one hundred eighty-three (82.4 percent) of the original two hundred twenty-two first grade retentions during the target

years. The remaining five elementary schools accounted for thirty-nine (17.6 percent) of the first grade retentions. The high retaining schools retained an average of 6.9 percent of their first grade students. The low retaining schools retained an average of 2.2 percent of their first graders. The subjects for this study were selected from the one hundred eighty-three students who were retained at the high retaining schools.

The second stage of the sampling procedure began with a search for the students' scores from the Iowa Tests of Basic Skills (ITBS) conducted through the district's Department of Research and Evaluation. Of the one hundred eighty-three students retained during the target years at the high retaining schools, one hundred thirty-two had complete reading, math and language ITBS scores from the end of their first year in first grade. Of these one hundred thirty-two students, eighty-two continued in the district through the end of their second grade year and had second grade ITBS scores. (Nine of the eighty-two students were eliminated from the study because suitable matched controls were not subsequently found.) The remaining seventy-three students therefore served as the subjects in this study. A breakdown of the subjects based on gender and ethnicity is provided in Table 1.

Table 1. Subject Gender and Ethnicity

	Hispanic	Anglo	Total
Male	34	11	45
Female	23	5	28
Total	57	16	73

Although names of limited English proficient students may have been included in the original two hundred twenty-two retained students, these students were automatically removed from the study during the search for ITBS scores as the ITBS is not administered to limited English proficient students in the district of study.

Two groups of controls were utilized in this study. The control group subjects were selected from schools with high and low retention rates in order that findings would be generalizable across these situations.

Control Group - The first control group consisted of an equal number (N=73) of children in the same school district. All individuals in this control group were students attending the low retaining schools who had not been retained in the first grade and who continued in the school district through their second grade year. The

controls were initially matched with the experimental group by sex and by ITBS scores from the end of the first year of first grade in the areas of reading, language and math (within one standard error of measure). Using this method, forty-one of the subjects had potential matches. Potential controls for the remaining thirty-two subjects were found by matching sex and ITBS scores from two of the achievement areas. After obtaining a pool of potential controls for each subject by matching on sex and ITBS scores, the "best" control was selected for each subject by matching birthdate, ethnicity, socioeconomic status and primary language of the home. Once matching was completed, ITBS scores from the end of the subjects' and controls' second grade years were compared.

Control Group Two - The second control group also consisted of an equal number (N=73) of children in the same school district. Individuals in this group, however, were students attending the high retaining schools who had not been retained in the first grade and who continued in the school district through their second grade year. These controls were also initially matched with the experimental group by sex and by ITBS scores from the end of the first year of first grade in the areas of reading, language and math. Forty-nine of the subjects had potential matches using this method. Potential controls for the remaining

twenty-four subjects were found by matching sex and ITBS scores from two of the achievement areas. The "best" control was then selected for each subject by matching birthdate, ethnicity, socioeconomic status and primary language of the home. Once matching was completed, ITBS scores from the end of the subjects' and controls' second grade years were compared. All standard scores compared were based on the 1985-1986 ITBS norming sample.

Instrumentation

The achievement measures used in this study were selected tests from the Iowa Tests of Basic Skills Batteries (ITBS). These batteries provide comprehensive measurement of fundamental skills in the areas of listening, word analysis, vocabulary, reading, language, work-study and mathematics. The ITBS are constructed in levels in order to measure continuous development from kindergarten through grade nine. Specific to this study is the Primary Battery which contains levels seven and eight. These levels are designed to measure skills at the end of the first and second grade years respectively. The thirteen tests in the Primary Battery are essentially untimed power tests. Nine of the thirteen tests are administered orally in order to minimize effects of reading on skills independent of reading. Selected for comparison in this study were the tests of reading, language and math

given that these tests measure corresponding fundamental skills. The content of these portions, as described in the ITBS Manual for School Administrators, Forms G/H (1986), are discussed below.

At levels seven and eight, the reading portion is composed of three tests identified as R-1, R-2 and R-3. R-1 is described as a test of picture interpretation and utilizes pictures incorporating implied actions and relationships. At level seven two types of items are presented. The first set includes questions about the pictures which can be answered yes or no. The second set consists of items which require selection of a word that fits in an incomplete sentence and makes the statement true. In level eight only the second set of items are used. R-2 emphasizes relating language expression to experience and is a test of sentence comprehension. Questions in R-2 can be answered yes or no. Whereas R-2 is a test of sentence comprehension, R-3 is a test of story comprehension emphasizing the understanding of ideas expressed or implied in several passages. Multiple-choice questions are presented following each passage.

The language portion of the ITBS at levels seven and eight is divided into the separate tests of spelling (L-1), capitalization (L-2), punctuation (L-3) and usage and expression (L-4). These tests measure basic skills common

to standard written English. L-1 items at levels seven and eight consist of three different words, one of which is misspelled. The testee is required to identify the misspelled word. The three words are presented orally in the context of a sentence. Given that capitalization and punctuation skills are functionally employed in writing, materials for tests L-2 and L-3 were designed to reflect a level of sophistication commensurate to the testee's developmental level. Item phraseology is therefore similar to that of a child's writing. For both L-2 and L-3 several short passages are presented and the student is instructed to mark where punctuation is needed or mark the oval under the first letter of any word in the passage which requires capitalization. L-4 was developed in order to measure knowledge of word forms and grammatical constructions in both written and oral language. At levels seven and eight the L-4 tests are presented in written form and are orally presented. Each item requires the student to select the best of three sentences. Some items involve variations in word order while others incorporate common mistakes in written or oral language.

The math portion of the ITBS at levels seven and eight consists of three different tasks. M-1 measures mathematical concepts, with a total of eighteen objectives tested in the primary battery. M-2 tests problem solving

skills involving addition and subtraction processes, multiplication and division processes and multistep problems. The problems presented in M-2 are designed to be both novel and contemporary to the testee and are designed to reflect "real world" scenarios. Finally, M-3 focuses on computational skills using the basic operations of addition, subtraction, multiplication and division.

Reliability - Information regarding the reliability of the ITBS can be found within the ITBS Manual for School Administrators, Forms G/H (1986) and in the ITBS Manual for School Administrators Supplement, Form J (1990). Internal-consistency reliability coefficients for levels seven and eight range from .910 to .919 for reading, .912 to .937 for language and .910 to .919 for math. Equivalent-forms reliability coefficients and standard errors of measure are also reported in the manuals.

Equivalence of Forms - Forms G, H, and J were equated using the equipercentile method. In 1983 and 1984 Forms G and H were concurrently developed to similar difficulty specifications and content from the same pool of pretried items. For those tests composed of independent exercises, items with similar content, difficulty and skill were initially assigned at random to the two forms. So that comparable difficulty levels were attained for Forms G and H, adjustments were subsequently made. Adjustments were

also made to avoid an excessively high level of similar content. For other tests without independent exercises (i.e., items associated with a map or particular reading passage), clusters of interrelated items were assigned as units to the two forms. Individual items within each cluster were then chosen to meet difficulty and content specifications.

Initially the raw scores from Forms G and H were equated to each other and to raw scores from previously standardized Form 7. This equating took place in 1984 through a series of prepublication projects. Final equating of Forms G and H was based on results obtained from 30,000 students at each grade level in the 1985-1986 Iowa Basic Skills Testing Program. Details of this equating process can be found in the ITBS manual (1986).

Form J was assembled to similar difficulty and content specifications used for Forms G and H. In 1988 Form J was equated to Form G using a nationwide sample of thirty-two schools. Details are outlined in the ITBS manual supplement (1990).

Predictive Validity - The ITBS manual (1986) outlines two predictive studies using levels five and six of Forms 7 and 8. Outcomes suggest a substantial relationship between early grade ITBS scores and later measures of readiness and achievement. The ITBS manual (1986) also reports the

results of several research studies which focused on prediction of high school and/or college success based on previous ITBS scores (Siannell, 1958; Rosemier, 1962; Lloyd, Forsyth & Hoover, 1980; Ansley & Forsyth, 1982; Gaffney, 1958). Based on these studies, a strong relationship is evident between ITBS performance and later academic success.

Testing Procedures

The ITBS were administered to English dominant students in the district of study during April of each target year. Form G or H was administered during the 1986-1987 school year, Form H during the 1987-1988 school year and Form J during the 1988-1989 and 1989-1990 school years. The exact dates of test administration were scheduled by the state department of education and were therefore the same across schools. A test coordinator from each school was selected annually by the school principal. The coordinator was either a classroom teacher or other certified professional personnel within the school. Two to three weeks prior to the testing week the coordinators from each school met with the Director of Research and Evaluation for the district. At this time coordinators were instructed regarding general testing procedures and procedures for test booklet dissemination and teacher (test administrator) training. Three to four days prior to the

testing a meeting of the classroom teachers was held with the school's testing coordinator in order to provide training. Examiner adherence to the standardized testing procedures was strongly emphasized. A complete outline of the information provided to the test administrators can be found in the ITBS Manual for School Administrators (1986).

Test administrators were responsible for following the daily and weekly test time schedules as outlined in the corresponding teacher manual. Students who were absent for portions of the testing were given an opportunity to complete these portions during make-up sessions scheduled throughout the testing week. At the end of the week all testing materials were returned to the building test coordinator. Materials from all of the district's schools were then returned to the Office of Research and Evaluation where the testing documents were organized and packaged for electronic test processing by Riverside Scoring Service.

Hypotheses

The following hypotheses stated in the null form were the primary foci of the study:

Hypothesis 1

There will be no significant difference in reading achievement at the end of the second grade between students

retained in the first grade and students not retained in the first grade matched with the retainees.

Hypothesis 2

There will be no significant difference in math achievement at the end of the second grade between students retained in the first grade and students not retained in the first grade matched with the retainees.

Hypothesis 3

There will be no significant difference in language achievement at the end of the second grade between students retained in the first grade and students not retained in the first grade matched with the retainees.

Hypothesis 4

There will be no significant difference in second grade reading, language and math achievement benefits from first grade retention between male and female subjects.

Hypothesis 5

There will be no significant difference in second grade reading, language and math achievement benefits from first grade retention between Hispanic and Anglo subjects.

Data Analysis Procedures

Consistent with the stated hypotheses, a 2 x 2 x 3 multivariate analysis of variance (MANOVA) was conducted.

The first factor, ethnicity, consisted of 1) Hispanic and 2) Anglo students. The second factor, gender, consisted of 1) male and 2) female students. The final factor, retention status, consisted of 1) retained students, 2) promoted students from low retaining schools and 3) promoted students from high retaining schools. The dependent variables were measures of reading, math and language achievement. In addition, a multiple discriminate function analysis was conducted with the criterion variable of retention status. Ethnicity, gender and achievement (in reading, math and language) served as the predictor variables.

CHAPTER 4

RESULTS

This chapter is devoted to a presentation of the findings as they emerged from the analysis of data obtained on the three groups of subjects. The obtained findings are examined in light of each hypothesis and appropriate decisions are made regarding the acceptance or rejection of the hypotheses at the stated (.05) level of significance.

Results Related to Hypothesis 1

The first hypothesis states that there will be no significant difference in reading achievement at the end of the second grade between students retained in the first grade and students not retained in the first grade matched with the retainees. This hypothesis is related to the examination of differences between retained and nonretained subjects on their reading performance on the Iowa Tests of Basic Skills (ITBS). The findings of the multivariate analysis of variance (MANOVA) as presented in Table 2 indicated an F ratio of .853 ($F_{2/216} = .853$) for this variable. The obtained significance level was .43. An examination of the average performance of the three groups as presented in Table 2 suggested that the retained group

Table 2

Means and standard deviations of retained and control groups in reading, language and math

Variable	Groups			F	p
	Retained	Control 1	Control 2		
Pretest					
Reading	29.27 (11.46)	33.11 (12.05)	29.99 (10.03)	2.418	.0915
Math	31.92 (13.84)	37.00 (15.98)	35.62 (12.49)	2.508	.0838
Language	34.48 (13.21)	34.62 (12.32)	38.73 (11.84)	2.734	.0672
Posttest					
Reading	39.49 (17.11)	36.71 (14.36)	36.51 (14.66)	0.853	.4274
Math	40.42 (16.09)	39.27 (15.78)	41.00 (16.12)	0.242	.7852
Language	42.29 (15.90)	40.95 (15.92)	43.03 (13.21)	0.358	.6992

had an average second grade reading performance of 39.49 (SD = 17.11). The first control group had an average second grade reading performance of 36.71 (SD = 14.36) and the second control group had an average second grade reading performance of 36.51 (SD = 14.66). The non-significant F ratio suggested that there is no significant difference in reading performance among the three groups of subjects. Consequently, the first hypothesis is accepted.

Results Related to Hypothesis 2

The second hypothesis states that there will be no significant difference in math achievement at the end of the second grade between students retained in the first grade and students not retained in the first grade matched with the retainees. This hypothesis is related to the examination of the differences between retained and nonretained groups of subjects on their performance on the ITBS in the area of math. The obtained findings (Table 2) indicated an F ratio of .242 ($F_{2/216} = .242$) with a probability of .79. An examination of the mean performance of the three groups (Table 2) suggested that the retained group had an average second grade math performance of 40.42 (SD = 16.09). The first control group had an average second grade math performance of 39.27 (SD = 15.78) and the second control group had an average second grade math performance of 41.00 (SD = 16.12). These findings suggest

that there is no significant difference in math performance among the three groups of subjects. Consequently, the second hypothesis is accepted.

Results Related to Hypothesis 3

Hypothesis three states that there will be no significant difference in language achievement at the end of the second grade between students retained in the first grade and students not retained in the first grade matched with the retainees. This hypothesis is related to the examination of the differences between retained and nonretained groups of subjects on their performance in the area of language on the ITBS. Findings of the MANOVA as presented in Table 2 indicated an F ratio of .358 ($F_{2/216} = .358$). The obtained significance level was .7. An examination of the average performance of the three groups (Table 2) suggested that the retained group had an average second grade language performance of 42.29 ($SD = 15.90$). The first control group had an average second grade language performance of 40.95 ($SD = 15.92$) and the second control group had an average second grade language performance of 43.03 ($SD = 13.21$). These findings indicated that there is no significant difference in language performance among the three groups of subjects. Consequently, the third hypothesis is accepted.

Results Related to Hypothesis 4

Hypothesis four states that there will be no significant difference in second grade achievement benefits from first grade retention between male and female subjects. This hypothesis is related to the examination of differences in achievement between retained and nonretained groups of subjects based on their gender. Findings of the MANOVA as presented in Table 3 indicated an F value of .567 ($F_{3/205} = .567$) for this variable. The obtained significance level was .64. These findings suggested no significant difference among the three groups of subjects based on gender across all three achievement areas. Consequently, the fourth hypothesis is accepted.

Results Related to Hypothesis 5

Hypothesis five states that there will be no significant difference in second grade achievement benefits from first grade retention between Hispanic and Anglo subjects. This hypothesis is related to the examination of the differences in achievement between the retained and nonretained groups of subjects in respect to ethnicity. Findings of the MANOVA as presented in Table 3 indicated an F value of .834 ($F_{3/205} = .834$) for this variable. The obtained significance level was .48. These findings suggested no significant difference among the three groups

Table 3

Multivariate analysis of variance (MANOVA) of achievement test scores*

Source	df	df	F	p
Gender (A)	3	205	0.567	.637
Ethnicity (B)	3	205	0.834	.477
Group (C)	6	410	0.532	.784
A X B	3	205	0.450	.718
A X C	6	410	0.509	.802
B X C	6	410	0.372	.897
A X B X C	6	410	0.709	.643

* Wilks' Lambda test of the multivariate hypothesis could not be rejected; Lambda = .979, p = .643

of subjects based on ethnicity across all three achievement areas. Consequently, the fifth hypothesis is accepted.

Additional Analyses

In addition to the results obtained which address the presented hypotheses, the data analysis permitted the examination of interaction effects. Results of these analyses are presented in Table 3. Four interactions were examined across the three dependent variables of reading, math and language achievement.

Gender X Ethnicity Interaction - The interaction between gender and ethnicity was found to be insignificant as the obtained F value of .45 ($F_{3/205} = .45$, $p = .72$) was lower than the F value needed for significance. These findings suggest no significant interaction between gender and ethnicity across the dependent variables of reading, math and language.

Gender X Group Interaction - The interaction between gender and group placement indicated an F value of .509 ($F_{6/410} = .509$). The significance level was .8. These findings suggest no significant interaction between gender and group placement across the dependent variables.

Ethnicity X Group Interaction - The interaction between ethnicity and group placement indicated an F value of .372 ($F_{6/410} = .372$). The significance level was .9. These findings suggest no significant interaction between ethnicity and group placement across the dependent variables.

Gender X Ethnicity X Group Interaction - The interaction between gender, ethnicity and group placement was found to be insignificant as the obtained F value of .709 ($F_{6/410} = .709$, $p = .64$) was lower than the F value needed for significance. These findings suggest no significant interaction between gender, ethnicity and group placement across the dependent variables.

The obtained data from the three groups was also analyzed by using a multiple discriminate function analysis and by using analysis of covariance procedures. In the multiple discriminate analysis, gender, ethnicity, pretest scores in reading, math and language and posttest scores in reading, math and language were entered as predictor variables. Placement status was used as the dependent measure. The primary focus of this analysis was to determine whether the independent variables could make significant discriminations between the retained and nonretained status of the subjects. A review of the findings obtained from this analysis corroborated with the findings of the MANOVA suggesting that placement status could not be identified by any of the predictor variables. Means and standard deviations are reported in Table 2.

An attempt was also made to hold the impact of pretest performance constant in order to examine the differences among the three groups of subjects on the three achievement posttests. As a result, the pretest was used as a covariate. An examination of the obtained F ratios for the various mean variables (sex, ethnicity, and placement status) as well as the interaction effects showed that none of the obtained F ratios were significant. The findings of the covariance analysis, therefore, also support the findings of the two previous analyses (Appendix B).

CHAPTER 5

DISCUSSION

This study attempted to examine the impact of early grade retention on academic achievement of students in subsequent grades. More specifically, the focus of this study was to examine the effect of first grade retention on achievement at the end of the second grade. The effects of first grade retention on subjects of differing gender and ethnicity were also examined. Seventy-three elementary school children participated as the subjects in this study. All of these students were retained in the first grade. Matched groups of nonretained counterparts comprised the control groups. The experimental and control group subjects were matched on ITBS scores in reading, language and math, sex, ethnicity, primary language of the home, birthdate and socioeconomic status. Of the two control groups, the first group was selected from elementary schools which had low rates of first grade retention. Students in the second control group were selected from elementary schools which had high rates of first grade retention.

Conclusions

The overall direction of the obtained findings clearly revealed that first grade retention does not have beneficial impact on second grade achievement, particularly in the areas of reading, math and language. These results add to the growing body of research which indicates that retention is not an effective procedure for meeting student achievement needs (Holmes & Matthews, 1984; Holmes, 1989; Jackson, 1975). This study, therefore, supports findings obtained from previous research indicating the ineffectiveness of retention at the first grade level in remediating academic deficits (Dobbs & Neville, 1967; Baenen, 1988; Johnson, Merrell & Stover, 1990; May & Welch, 1984). Even though some researchers report initial achievement benefits for kindergarten and first grade retainees, longitudinal studies reveal that initial gains do not continue to hold up over time (Gredler, 1984; May & Welch, 1984; Smith & Shepard, 1987). Typically, any achievement gains which might be immediately attributable to retention are nonexistent after several more years in a student's academic career. It is concluded from this study and previous research that retention, especially at the first grade level, is not an effective educational intervention in addressing student achievement deficits.

Despite the evidence in the literature regarding the nonbeneficial impact of first grade retention, this study was conducted to verify such findings by incorporating changes in methodology and changes in the background characteristics of the subjects. As stated earlier, the method changes in this study related to the utilization of two control groups of subjects coming from schools with different rates of retention. The objective in utilizing two control groups was to enhance the generalizability of the obtained results. In addition, it should also be noted that very few studies have used samples consisting of predominately minority subjects. Since this study had an overwhelming number of Hispanic subjects, the nonbeneficial impact of retention appears to be the same for such subjects as well.

Discussion

It should be noted that the effect of retention was the same across ethnicity, gender and achievement in reading, language and math. These findings refute the claims of many educators and researchers (Van Zant, 1982; Juel & Leavell, 1988; Pomplun, 1988; Butler & Handley, 1990) who are proponents of retaining students in the first grade in order to attain future achievement gains. These researchers report that retained students made gains in achievement as compared to their nonretained peers.

Although findings of this study clearly point to the nonbeneficial effect of retention on achievement in the basic skill areas, these results should not be construed to mean that such impact extends to nonacademic achievement areas as well. In the early years of development, non-cognitive areas may be of equal importance. As an example, studies have been conducted which have focused on the effects of retention on student characteristics such as personality, social-emotional adjustment, and in dropping out behaviors. Results from such studies as ones conducted by Chansky (1964) and Ammons (1976) indicate that there are no significant differences between retained and promoted children in the area of social-emotional adjustment. Conversely, several researchers have reported that the retention practice results in a negative impact on student social-emotional adjustment (Henderson & Long, 1971; Godfrey, 1972; White & Howard, 1973; Byrnes, 1989). It is reported in these studies that retained students score lower on measures of self-concept than their nonretained peers. Based on his meta-analysis of previous research, Holmes (1989) reported that retained students are generally rated more poorly on measures of personal and social adjustment than their nonretained matched peers.

Several studies have examined the relationship between retention and dropout rates (Kitch, 1952; Thomas & Knudsen,

1965; Lloyd, 1971; Craig, 1978; Haddad, 1979; Floyd, 1982; Hill, 1989; Grissom & Shepard, 1989). The results of these studies lend strong support to the conclusion that retention adds to the risk of student dropout behavior.

Consideration of Future Issues

Given the results of this study, it is apparent that the investigation of alternative strategies for addressing student achievement deficits is essential. For example, current grade level structures of schools should be analyzed. A continuous progress, flexible programming format which focuses on mastery of skills at individual rates of learning may be effective. In addition, the effectiveness of various remedial techniques which provide extra instructional assistance should be examined. Programs such as summer school, after-school tutoring and peer tutoring may be beneficial. Monies saved by not retaining students may be more effectively used in these interventions. The use of support school personnel to work with identified children should be considered as well. Instructional aides and specialists trained in remedial programs and techniques might be utilized. Once again, savings accumulated by not retaining students may be budgeted for these alternatives. Finally, development of individual education plans for low achieving students might

prove useful so that classroom teachers are providing appropriate interventions and enrichments to each student.

The nonbeneficial impact of retention on academic learning, as evidenced in this study, raises a number of additional issues. First, many educational and psychological theories may lend support to retention practices, assuming that additional time at a particular grade level may better prepare students for experiencing success at subsequent grades. Given such support from theories, future studies may be required to examine issues such as aptitude-treatment interaction effect. The effect of retention on student learning with variable characteristics such as aptitude, levels of motivation and attitudes toward education should be taken into consideration. Nonbeneficial impact of retention similarly raises concerns regarding the cost-effectiveness of such practices. Retention of students adds to the overall expenditure in the educational setting. In our current fiscally difficult climate, retention practices need to be examined more closely.

The overall direction of these findings also leads to the examination of curricular and related issues associated with current retention practices, such as the length of retention time needed for programs to be beneficial in enhancing student achievement. As an example, an entire

additional year for a student in the same curricular environment can certainly be viewed as punishing and non-motivating. Therefore, it is critical that appropriate changes in the learning environment as well as consideration of expanding instructional activities be researched to adequately examine the adequacy of current retention practices.

APPENDIX A

Human Subjects Committee

1690 N. Warren (Bldg. 526B)
Tucson, Arizona 85724
(602) 626-6721 or 626-7575

March 25, 1994

Lori Kay McCorkle-Benz, M.Ed.
c/o Shitala Mishra, Ph.D.
Department of Educational Psychology
Education Building, Room 602
Main Campus**RE: THE EFFECTS OF EARLY GRADE RETENTION ON ACADEMIC ACHIEVEMENT
AT SUBSEQUENT GRADES**

Dear Ms. McCorkle-Benz:

We have received documents concerning your above cited project. Regulations published by the U.S. Department of Health and Human Services [45 CFR Part 46.101(b) (4)] exempt this type of research from review by our Committee.

Thank you for informing us of your work. If you have any questions concerning the above, please contact this office.

Sincerely yours,

A handwritten signature in cursive script that reads "William F. Denny".

William F. Denny, M.D.
Chairman
Human Subjects Committee

WFD:js

cc: Departmental/College Review Committee

APPENDIX B
 MULTIVARIATE ANALYSIS OF COVARIANCE* OF
 ACHIEVEMENT TEST SCORES

Source	df	df	F	p
Gender (A)	3	202	0.655	.580
Ethnicity (B)	3	202	1.081	.358
Group (C)	6	404	0.732	.624
A X B	3	202	1.027	.382
A X C	6	404	0.610	.722
B X C	6	404	0.368	.899
A X B X C	6	404	0.655	.686

*Pretest scores used as a covariate.

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