

A STUDY OF THE READING AND MATH
ACHIEVEMENT OF RETAINED
ELEMENTARY STUDENTS

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A STUDY OF THE READING AND MATH ACHIEVEMENT
OF RETAINED ELEMENTARY STUDENTS

An Abstract
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Education Specialist

by
June Sharon Patterson
July 1981

ABSTRACT

The major purpose of this study was two-fold:

(1) to study the effect of retention of students in grades 1, 2, 3, and 4 on their achievement in reading and math when the grade is repeated, and (2) to determine the effect of retention on reading and math achievement in the next two grades after a grade is repeated.

Data for this study was obtained from the records and Metropolitan Achievement Tests scores of 28 students retained in grades one through four in Waverly, Tennessee.

The major conclusions of this study were: (1) students score higher in reading and math the year the grade is repeated, (2) student scores in reading and math decrease the grade following retention, (3) student scores in reading and math continue to decrease two grades following retention, and (4) student scores in reading and math remain below average after repeating a grade.

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To the Graduate Council:

I am submitting herewith a Field Study written by June S. Patterson entitled "A Study of the Reading and Math Achievement of Retained Elementary Students." I recommend that it be accepted in partial fulfillment of the requirement for the Specialist in Education degree.

George M. Rawlins, III
George M. Rawlins, III
Major Professor

We have read this field study
and recommend its acceptance:

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CHAPTER 1

INTRODUCTION

In recent years a return to a minimum competency standard in public schools has brought renewed interest on the part of those favoring grade retention. Elementary school teachers must constantly make the difficult decision of promoting or retaining students who have not achieved the basic skills for their grade level. They must decide whether to permit a student to advance to the next grade without having achieved these skills taught at his grade level, or to hold a student back for a year repeating the skills he has mastered as well as those he has not mastered.

Statement of the Problem

The major purpose of this study was two-fold:

(1) to study the effect of retention of students in grades 1, 2, 3, and 4 on their achievement in reading and math when the grade is repeated, and (2) to determine the effect of retention on reading and math achievement in the next two grades after a grade is repeated.

Hypotheses

The following hypotheses stated in the question form were investigated in this study.

H₁: Will there be a change in the mean reading achievement as measured by the Metropolitan Achievement Tests (MAT) for students who are repeating a grade level when the two years are compared?

H₂: Will there be a change in the mean math achievement as measured by the MAT for students who are repeating a grade level when the two years are compared?

H₃: Will there be a change in mean reading achievement as measured by the MAT for students one grade following retention?

H₄: Will there be a change in mean math achievement as measured by the MAT for students one grade following retention?

H₅: Will there be a change in mean reading achievement as measured by the MAT for students two grades following retention?

H₆: Will there be a change in mean math achievement as measured by the MAT for students two grades following retention?

Importance of the Study

In Humphreys County the only school board policy on grade retention concerns excessive absenteeism. In all other cases the teacher must make the decision of promotion or grade retention. If the teacher believes a student is capable of learning the skills taught for a grade level, but for some reason has failed to do so, the student may be

retained in order to "catch-up." The information gained from this study will be presented to the Superintendent of Schools and the Supervisor of Instruction. The purpose of this study was to provide information that will aid Humphreys County school administrators and teachers in the decision of promoting or retaining students who have not mastered the math and reading skills taught at their grade level.

Setting of the Problem

The first, second, and third grade students in this study attended Waverly Elementary School. There were approximately 550 students and 21 teachers. The fourth grade students attended Waverly Junior High School which contained grades four through eight. There were approximately 770 students and 35 teachers.

Investigation of local practices of grade retention revealed the following information was true in most cases:

1. The only local school board policy on grade retention concerned excessive absenteeism.
2. Classroom teachers, with the approval of the school principal, made the decision of retaining or promoting students.
3. A student was retained only one time.
4. A student was usually retained to "catch-up."
5. A student was not retained unless the teacher believed the student was capable of learning the material.

6. Some students were retained for being "lazy" and not doing their work.

7. Size and age of the child were considerations when retaining a student.

8. A student may have been retained for being very immature.

9. First grade had the highest number of students retained, followed by second grade, fourth grade, then third grade.

10. A student was often assigned to the same teacher when retained at Waverly Elementary School. A student at Waverly Junior High School was usually assigned to a different teacher.

11. Parents were notified before their child was retained.

12. There was little or no follow-up on retained students.

Limitations of the Study

This study was limited to the 28 students attending school in Waverly, Tennessee who were retained in the first, second, third, or fourth grade during 1973, 1974, or 1975, and who had Metropolitan Achievement Tests scores available for the four years of the study. It was also limited to the two areas of reading and math achievement.

Definition of Terms

The following terms were used in this study:

Grade Retention, Grade Repetition, and Nonpromotion:

Names given to the practice of requiring a student who has been in a given grade level for a full school year to remain at that level for a subsequent school year.

MAT: The 1970 edition of the Metropolitan Achievement Tests, by Harcourt, Brace and Jovanovich. These are a series of measures designed to tell teachers and school administrators how much pupils have learned in important content and skill areas of the school curriculum.

Reading Score: Percentile rank of the total reading score on the MAT.

Math Score: Percentile rank of the total math score on the MAT.

Percentile Rank: The percentage of pupils in a given rank that obtain scores equal to or less than a certain score. Percentile ranks range from a low of 1 to a high of 99, with 50 indicating average or typical performance.

Mean: The score calculated by dividing the sum of the scores by the number of scores.

Assumptions

The assumptions basic to this study were:

1. That the responses of the students on the MAT were honest and accurate within the limits of their

perception.

2. That the MAT is a valid instrument to measure the achievement of students in the areas of reading and math.

3. That the population of students in this study is typical of students being retained in Humphreys County.

Procedures

The following procedures were used in the pursuit of this study:

1. The literature in the area of achievement of retained students was reviewed.

2. The Humphreys County policy for grade retention was investigated.

3. Teachers and administrators were questioned about how and why students were retained.

4. The students for this study were identified through a search of all permanent records at Waverly Junior High School and Waverly Central High School.

5. Thirty-two students were identified but four were eliminated because they were missing one or more achievement test scores.

6. Each student was assigned a number from 1 through 28 by grade level.

7. Test scores were obtained from the MAT taken each spring.

8. The percentile rank of the total reading and

total math scores were used for measuring achievement.

9. The data were collected for the first year in a grade level and compared with the data from the year the student repeated the grade.

10. The mean percentile score and range of differences were compared.

11. The number of students showing a gain or loss in percentile scores was noted.

12. Data were collected for the two grade levels above the grade repeated and compared with the data from the repeated grade.

Organization of the Study

This study is reported in five chapters as follows:

Chapter 1 includes an introduction, statement of the problem, hypotheses, importance of the study, setting of the problem, limitations of the study, definition of terms, assumptions, and the procedures which were used.

Chapter 2 presents a review of related literature and research in the area of retained students.

Chapter 3 explains the procedures followed in this study and also information about the MAT.

Chapter 4 reports and interprets the data collected in this study.

Chapter 5 contains a summary of the problem, findings, and conclusions.

CHAPTER 2

A REVIEW OF RELATED LITERATURE

Grade retention, grade repetition, and nonpromotion are all names given to the practice of requiring a student who has been in a given grade level for a full school year to remain at that level for a subsequent school year. Grade retention is widespread and involves large numbers of students and great expenditures of funds.

In the early American schools student progress was an individual matter. A student progressed page by page in his or her text books. At the end of the school year the teacher noted the last page completed by the student and at the beginning of the next school year the student would continue where he or she had left off. Educational status was determined by which books a student had completed. As the graded school emerged, students were divided into classes according to their chronological age. All students were to pursue the same studies at the same time. Students were not expected to go to a new level in one subject until they had achieved the same levels in all other subjects.

Grade retention, which originated in America in the nineteenth century public schools, provided the means of maintaining the graded system. Educators needed to provide some method of correcting academic deficiencies of students

prior to graduation. Students were kept in the same grade until they met the established standards. Failure was blamed on the students, and if they fell behind, they were considered undisciplined and lazy.

Grade retention was challenged during the 1930's and 1940's by movement toward what is known today as social promotion of students. This trend was brought about by advances in psychology and sociology which had occurred during the early twentieth century. A number of educators and social scientists had drawn attention to the special emotional and social needs of the developing child. The psycho-social development of the child was thought to be more important than the small gains in achievement grade repetition might give. As a result, the educational management strategies of repetition were increasingly abandoned in most American school systems. It was thought deficiencies in reading and mathematics could be corrected through remedial curricula instead of grade repetition. Educational thought and practice gave greater attention to individual needs and differences. Thompson (1980, p. 10) calls this movement "adapting the school to the child instead of adjusting the child to the school."

During the 1970's a return to a minimum competency standard in the public schools and a general "back to the basics" point of view brought renewed interest on the part of those favoring retention.

Progressively lower student performance on standardized tests reinforced a feeling that school children were not learning as well as students had before in certain basic subject areas. Many critics felt social promotion was one of the main reasons for this decline. Grade retention, it was reasoned, was practiced during the early twentieth century at a time when no marked student deficiencies in basic intellectual skills existed. Therefore, it was believed by some that the reintroduction of grade repetition might help solve the problem.

The efforts of those seeking to revive grade retention, while well intentioned, nevertheless deserve careful consideration. It should be kept in mind in 1940 less than half of the adult population had even begun high school, while in 1975 more than 90 percent had completed twelve years of schooling (Thompson, 1980). It should also be kept in mind the declines in student achievement on standardized tests originated during the mid-1960's, while grade retention declined in the 1930's and 1940's. Thus the chronological basis for linking grade retention with academic achievement disappears.

The pressure on the schools to revive old standards calls for a careful look at the research on grade retention and social promotion and a clarification of the issues involved.

The Problem of Flawed Research

Jackson (1975) provided us with a critical review of the research on grade retention. His review was based on a survey of all of the literature through June, 1973 and reported his intensive examination of the 44 available original research studies.

Jackson found the research on grade retention has made use of three basic analytical designs. The first and most commonly used type of design compared groups of students regularly promoted and retained under normal school policy. Although studies of this kind attempted to match students according to such characteristics as test scores, mental age, and socio-economic status, their basic design remained flawed and biased in favor of promotion. The fact of promotion indicated that the promoted students were experiencing less difficulty than their retained counterparts.

The second basic design compared the before and after conditions of nonpromoted students. This design was biased toward retention, since it did not control for any factors other than the retention itself that could influence student improvement.

The third basic design compared groups of problem students experimentally assigned to either promotion or retention and it alone was sound.

Studies of the first design have tended to support

promotion, and studies of the second design have tended to support retention. One cannot know to what extent their results reflected reality or their inherent biases. Only three studies have used the third design and these were done before 1941. They showed no dramatic pattern of results.

Jackson (1975, p. 628) stated the following weaknesses were common in the 44 reviewed studies and should be avoided in any future research:

1. the failure to sample from a population large and diverse enough to allow broad generalizations of the findings;
2. the failure to define carefully the treatments, for many different things can happen to children who are retained in a grade or promoted in spite of their difficulties, and the treatments are likely to have different effects;
3. the failure to investigate interaction effects between treatments, general characteristics of subjects, and conditions for which subjects were considered for grade repetition, and characteristics of the schools;
4. the failure to investigate long-term as well as short-term effects.

Jackson (1975, p. 627) concluded there is no reliable body of evidence to indicate that grade retention is more beneficial than grade promotion for students with serious academic or adjustment difficulties. He warns:

Those educators who retain pupils in a grade do so without valid research evidence to indicate that such treatment will provide greater benefits to students with academic or adjustment difficulties than will promotion to the next grade.

Jackson recommended more research of a higher quality than that completed in the past.

Support for Retention

Scott and Ames (1969) studied 27 elementary students who were retained in various grades and whose retention had been determined solely on the basis of immaturity. All children had an intelligence quotient of at least 90. The authors argued that many previous studies had found retention unprofitable because they had uncritically included all failed children in their sample. It should be expected that retention cannot remedy the problem of low ability and emotionally disturbed children. Scott and Ames found that retention seemed to help their immature students' academic performance and behavior. The authors concluded that retention is the solution for children who are too immature for their grade and need time to develop.

Chase (1968) studied the success of retention of 65 first-, second-, and third-grade repeaters who were basically "normal" and were repeating solely on the grounds of being immature. The author concluded repeating had fully met the needs of 75 percent of these children.

Finlayson (1975) conducted a study to explore the effect of nonpromotion on the self-concept of pupils in public elementary schools. He conducted a two-year study of retention and self-concept, using data collected on first graders at the outset of schooling and through their second year. His study compared the self-concept of 75

regularly promoted students, nonpromoted students, and promoted borderline students showing the same characteristics as the nonpromoted students. He was surprised that nonpromotion did not create self-concept problems. The self-concept scores of all three groups rose during the first year. During the second year the nonpromoted group of pupils continued to increase their self-concept scores significantly, while the scores of the promoted and borderline group dropped slightly. Finlayson concluded nonpromotion appeared not to hurt the self-concept of at least very young students and recommended more research on schooling and self-concept.

Owen and Rankin (1977) charged schools have been guilty for years of promoting poorly prepared students and expecting them to succeed with more advanced work. This practice is more damaging than retention and denies students the opportunity to master needed skills. It also permits schools to deny their responsibility for seeing that all students do learn. The new program of the Greenville County Schools, Virginia allows no student to be promoted until mastering the skills of his or her grade level. The school seeks to bring each pupil up to established standards and attends to the diagnosis of students' individual strengths and weakness, provides intensive instruction to meet the needs of the slower students, and creates an atmosphere of success. The authors reported the

program an unqualified success. Achievement test scores and measured IQs have risen, the dropout rate and number of retentions have fallen, and students, teachers, and the community have responded with satisfaction.

Support for Promotion

Koons (1977, p. 701) disagreed with the findings of Owen and Rankin and argued low achieving students who are promoted with their age peers can be given work at a level at which they can succeed and also there is no guarantee a student will learn the basic skills just by being retained in the same grade. Koons credited the success of the Greenville program with "It can be at best only an exercise in doing the wrong thing in the best way possible."

Koons warned educators contemplating this approach should take a look at the results of careful research studies showing regularly promoted low-achieving children score higher on achievement tests than do similar retained students after they spend an additional year in a grade. It has been shown for every student who may possibly benefit from nonpromotion there are two or more who may actually regress following nonpromotion. There is no criterion to predict which children may possibly benefit.

Bocks (1977) disagreed with the assumption that grade retention provides children "a year to grow" which led schools to fail over one million elementary children

in 1971. Bocks felt the assumption is a false one based on ignorance of research evidence. Bocks concluded research indicated nonpromotion brings no benefit to children and often brings harm. The majority of students who repeat a grade achieve no better the second time in the same grade. It fails to guarantee greater achievement. Nonpromotion causes students more social problems. The threat of nonpromotion does not aid motivation, and nonpromotion policies fail to decrease the range of student abilities with which teachers must cope. Bocks recommended schools adjust the classroom to meet the individual needs of all students.

Godfrey (1972) studied the results of a research project by the North Carolina Advancement School and concluded the data pointed out retaining students did not result in helping them "catch-up" academically--which was the justification for having them repeat the grade. Also, students who fail tend to doubt their own self-worth, have little confidence in themselves, see themselves as inadequate in social and family situations, and have poor attitudes. Godfrey recommended an examination of why children fail and to individualize instruction to meet the needs of each student.

Street and Leigh (1971) examined the experiences of first-graders in Kentucky public schools and found that academically a student who attempted first grade twice was not substantially better off than he or she was after

completing it the first time. They found the ages at which students entered the first grade exerted far more influence on achievement than did repetition or non-repetition of the curriculum.

Hess (1978) reported a comprehensive analysis of existing studies carried out by the Philadelphia Public Schools produced a number of conclusions. The survey suggested grade repetition failed to help students academically and created a number of social problems. The major problems of grade repetition centered around the fact the student involved is older and larger than his or her classmates, although his or her rate of learning is generally below that of the class.

According to Miller (1980, p. 155) the following are typical research findings about retention:

1. Although the main reason given for retaining a student is lack of subject matter mastery, research shows that retention does not bring significantly greater gains in subject matter mastery.
2. Fear of possible failure does not make students work any harder.
3. Greater homogeneity of achievement within a grade level does not result when retention is practiced.
4. The more times the student is retained, the lower will be his self-concept.
5. Students retained have more adjustment-socialization difficulties.
6. Teachers and peers tend to develop unfavorable attitudes toward students retained.
7. Low grades and retention may also bring unfavorable attitudes toward students' families.
8. Retention may be justified in the case of a child who has been absent a great deal, or for a very immature child.

Reiter (1973) researched the merits of policies of (1) automatic promotion for all pupils, and (2) rigid grade retention for all those whose achievement was judged deficient. Although neither was a panacea, promotion appeared to have fewer disadvantages than retention. Pupils who repeated one or more grades tended to become discouraged by their failure and to be no better off at the end of their schooling than if they had been promoted each year. For maximal learning to take place, the crucial issue is how the individual pupil is treated in his school, including how he is either promoted or retained, rather than the adoption of one policy or another.

Schools are seeking the ideal of no failure through such approaches as nongraded programs, individualized instruction and remedial instruction, but many factors will probably prevent the realization of this ideal. Schools may have to settle for a policy that favors social promotion in general, but occasionally permits purposeful retention in the primary grades.

The pressure for new standards and accountability has threatened the practice of social promotion. Thompson (1980) found this new conservative push rests on a weak foundation and offers no real critique of social promotion. Thompson concluded retention does not help achievement, and it seems to hurt student adjustment. It does not help motivation. It does not seem to help schools either reduce the range of student abilities or raise school

achievement. A policy of social promotion is preferable over a policy of retention. The best promotion policy short of the ideal of the continuous progress curriculum is one that calls for social promotion as a rule, but will permit an occasional retention when it appears to be in the best interest of a child. Some research suggested that retention can benefit immature students in the very early grades. When schools are in doubt they should promote students rather than retain them. Some studies have found that the ready availability of retention can encourage discrimination on racial, sexual, and socio-economic grounds. Misuse of discrimination can be discouraged through involvement of parents, teachers, and specialists in the decision-making process. Schools should be willing to meet the parents on the parents' own terms.

White and Howard (1973) explored the relationship between failure to be promoted in elementary school and the self-concept of the child. The subjects in this study were 292 boys and 332 girls in the sixth grade from six different school systems in North Carolina. The results in this study indicated that failure to be promoted was associated with a negative self-concept of elementary school children and those students who failed to be promoted more than once had a more negative self-concept than those who had failed only once. White and Howard suggested elementary school guidance counselors can help the student who has failed to

be promoted to identify the cause of this failure and to try to understand what can be done to increase the probability of success in the future. The earlier such problems can be diagnosed and cured the less likely they are to create serious self-concept problems.

Walker (1973) judged the present use of nonpromotion to be too great. Walker stated the evidence fails to support a policy of forced nonpromotion and suggested a nongraded, continuous progress program seems an appropriate response to the problem of slow achieving students since it removes conflict between the graded structure of schools and students' individual differences. Walker concluded more faithful implementation of the nongraded theoretical model and more comprehensive evaluation is needed in order to judge the benefits of such programs.

Hess (1978) discussed the financial cost of grade retention. The expenditures may be analyzed on a per student basis. Retention gives the school one year for the price of two. If the individual concerned substantially benefits from the retention process, then these funds are well spent. Hess asked if the expenditures can be justified when the results are of questionable value.

Individual Factors to be Considered

Research on retention is inclusive to date. A decision for or against retention should not be made on the basis of statistical evidence, according to Lieberman (1980),

but should be made on an in-depth analysis of all factors contributing to each individual situation. Child factors, family factors, and school factors must be considered.

Child Factors

Physical disabilities. Children who suffer from cerebral palsy, deafness, blindness, congenital heart defects, arthritis, and other physical abnormalities, may demonstrate limited readiness skills.

Physical size. Very large or very small physical size is important. Small stature would be associated with "for retention."

Academic potential. Potential is defined in terms of learning rate. Chronic underachievement should not necessarily be a criterion for retention but the need for prolonged periods of practice when preliminary learning takes place may be a criterion for retention.

Psychosocial maturity. Immature children may benefit from retention.

Neurological maturity. Retention may be a corrective measure for school intake based solely on chronological age.

Child's self-concept. The child's self-esteem is important. The concern is the possibility of detrimental impact when the child becomes convinced he is looked upon as a failure. This problem is often more difficult for the adults involved with the child than for the child himself.

Child's ability to function independently. This factor is highly significant because as children progress to higher grades, greater and greater responsibilities for independent learning and performance is expected. Retention should not be used because of a willful lack of task performance because this retention may represent disciplinary action. Retention should never be used as a substitute for special education.

Grade placement. Research indicates retention may be a valuable option for kindergarten through second grade. Third grade is pivotal. Students retained beyond fourth grade are usually the victims of inappropriate disciplinary action or a lack of special education services. Also, self-concept issues seem to be of greater importance beyond the third grade.

Chronological age. Students at the highest risk for primary grade failure are males who are the youngest or close to being the youngest in the class.

Previous retention. Except with certain handicapped children one retention is enough.

Nature of the problem. Behavior and learning are two major problems noted in retention issues. Retention is almost always considered on the basis of learning-related difficulty. Retention should not be considered because of behavior problems.

Chronic absenteeism. If a child's record of absenteeism is so severe it becomes an important factor in

the child's underachievement, retention may be a way to provide him with the instruction he has missed.

Basic skill competencies. This factor is the reason most often cited when a school system wishes to retain a student. Basic skill deficiencies may result from a multitude of factors. A student who is severely deficient in his basic skill acquisition may require an in-depth analysis of the reasons for his difficulties by a multi-disciplinary team.

Peer pressure. A student's self-concept, ties with close friends, and peer relationships outside of school must be considered.

Child's attitude toward retention. Although a child's ability to judge his own best interest remains questionable, a child's voice should still be heard, especially in cases of strenuous personal objections or affirmations.

Family Factors

Geographical moves. Frequent moves can have staggering impact on the continuity of a child's education. Methods and materials are inconsistent, goals and objectives change, and learning, study, and performance patterns are never clearly established. It seems easier to retain a student when he is entering a new school.

Attitude toward retention. Personal history of retention, cultural attitudes, and pressure from friends,

neighbors, and relatives may all influence this important factor.

Age of siblings and sibling pressure. A younger brother or sister who performs better in school than an older sibling is a highly significant factor against retention. To be stigmatized within one's family may be psychologically overwhelming.

School Factors

School system attitudes toward retention. Some school systems have a policy of retention, some a policy of social promotion, and some systems do not have a set policy. The building principal is usually able to set policy within the school.

Teacher attitude toward retention. A classroom teacher who has attempted to teach a child and has not succeeded due to a number of factors may be in the best position to evaluate the potential efficacy of retention. The teacher must also evaluate the nature of the instruction that has been tried and failed.

Availability of special education services. Retention without some form of special education involvement is meaningless because the child may find himself again in the failing situation which originally led to his retention. A retained student will need more than a regular classroom program.

Availability of personnel. Usually children should

not repeat a grade with the same teacher. Moving the child to a different school may be beneficial.

Light (1977) devised a retention scale to help describe an individual student's situation. The factors he used are: school attendance, intelligence, present level of academic achievement, physical size, student's age, sex of student, siblings, previous retention, history of learning disabilities, student's attitude about possible retention, parent's school participation, motivation to complete school tasks, history of delinquency, knowledge of English language, present grade placement, transiency, emotional problems, experiential background, and immature behavior.

How the pupil is promoted or retained is more important than whether he is.

Hagen (1980) recommended careful and early planning, talking and working with parents, and helping the student feel good about himself and his work.

Hallenback (1981, pp. 66-69) gave the following steps that can be taken to mitigate the negative feelings that might be encountered when the decision has been made in favor of retaining a child:

1. Enlist the cooperation of the parents before approaching the child on the subject. Parents have a natural inclination to judge themselves by the achievement of their offspring. Assure substantial number of dollars for an extra year of education for their child.
2. Impress on them the importance of their acceptance of the retention as a positive

- step, and not one taken as a result of the child's poor behavior or lack of effort.
3. Never guarantee to parents that their child will score higher scholastically the following year. Emphasize that emotional and maturational growth are equally important to academic achievement, and they do not necessarily occur simultaneously.
 4. The decision to retain should be discussed with the child in a one-to-one conference. This conference is vital. The tone should be set by a SMILE on the face of the teacher. The child must be helped to understand, without any doubt, that he has not failed himself or anyone else.
 5. Ask if the child would like to remain in the same room the following year. Let him know he would be welcome. This is often an advantageous arrangement, if a good rapport exists between the teacher and child, as it gives the teacher an opportunity to help the child's self-esteem by allowing him to become a teacher's "aide" to her the following year.
 6. Keep the parents and all concerned informed of the positive traits the child is developing as he repeats the grade.

Mooney and Mooney (1970) suggested teachers convince the parents and their child that the child has not failed, but just needs more time to grow and develop. The positive aspects should be emphasized. It is the parents and teacher who can prevent a child from being hurt by retention. If a child is considered a failure or slow, or stupid, he will be crushed by retention.

Alternatives to Retention

Several studies, already mentioned, have suggested having the school adapt to the needs of the child.

Several studies have shown a pupil's rate of progress in school is closely related to his age, race, sex,

rural/urban status, parent's income, and parent's education. These variables are beyond the control of the pupils themselves and are also beyond the control of the schools' policymakers.

Some school systems are changing emphasis in the use of standardized test results. There appears to be a decreasing concern for end-of-the-year statistics, and more feeling that teachers should have the test results in time to use them in planning the lessons that will be best for each student.

Walker (1973) suggested nongraded, continuous programs as an alternative to retention. Nongradedness makes the question of promotion or retention obsolete.

Subject repetition and remedial instruction are possible alternatives to grade retention. Increased interaction between teachers and parents seems desirable. With the aid of parents, educators can better pinpoint learning deficiencies at a time when such problems can be dealt with on a piecemeal basis.

Reinherz and Griffin (1970) theorized that academic difficulties might be due as much to lack of learning readiness on the part of the individual child as to any other factor and suggested transitional or ungraded classes for individuals experiencing learning difficulties.

Lieberman (1980) also suggested transition classes that require three years to complete two grades. (A child goes from first grade into a first-second grade combination

and then the following year into the second grade.)

Reiter (1973) believed the attitudes of pupils, teachers, and parents are crucial if retention is to be interpreted constructively. If promotion and retention are to be viewed not as reward and punishment but rather as alternative placements for maximum learning, all groups must be helped to understand them as such.

The concerns surrounding grade promotion and retention are important ones and there are no simple solutions to these difficulties.

CHAPTER 3

PROCEDURES

The purpose of this chapter is to explain the procedures followed in this study and to provide information about the MAT.

The students for this study were identified through a search of all permanent records at Waverly Junior High School and Waverly Central High School. Thirty-two students were found to have been retained in the first, second, third, or fourth grade during 1973, 1974, or 1975. These years were selected in order to have MAT scores for four years. The school system changed to California Achievement Tests in 1979. Of these 32 students, four were lacking one or more MAT score and were eliminated from this study.

The 28 students were numbered by grade; numbers 1 through 15 were retained in the first grade, 16 through 23 were retained in the second grade, number 24 was retained in the third grade, and numbers 25 through 28 were retained in the fourth grade.

The students in the first grade were given MAT Primary I Level. It had the following items: 35 in word knowledge, 40 in word analysis, 42 in reading, and 62 in math concepts.

The second grade students were given MAT Primary II

Level. It had the following items: 40 in word knowledge, 35 in word analysis, 44 in reading, 30 in spelling, 33 in math computation, 40 in math concepts, and 35 in math problem solving.

The third and fourth grade students were given MAT Elementary Level. It had the following items: 50 in word knowledge, 45 in reading, 50 in language, 40 in spelling, 40 in math computation, 40 in math concepts, and 35 in math problem solving.

Total reading and total math scores were selected for this study because these were the only scores all four grades had in common.

Percentile rank, the percentage of pupils that obtain scores equal to or less than a certain score, was selected for comparison because it is more specific than stanine or grade equivalent.

The MAT reading and math scores were collected for each of the four grades. The reading and math scores for the students retained in the first grade and second grade were compared separately, but the scores for students retained in the third and fourth grade were reported together because of the small group.

The data were collected for the first year in a grade level and compared with data from the year the student repeated the grade. The mean score and range of differences were compared.

Data were collected for the two grade levels above

the grade repeated and compared with the data from the repeated grade.

Metropolitan Achievement Tests

Metropolitan Achievement Tests are a series of measures designed to tell teachers and administrators how much pupils have learned in important content and skill areas of the school curriculum.

Buros (1978) provides several critiques of these tests. One, written by Norman E. Gronlund, concluded the 1970 edition of the MAT was carefully developed and standardized, and measures important skill and knowledge outcomes. Another, written by Richard M. Wolf, judged the MAT as high quality instruments despite some minor conceptual and technical flaws. Fred Pyrczak pointed out some weaknesses in individual items but concluded the reading tests are good for obtaining a rough indication of broad areas of strength and weakness in reading. Darrell L. Sabers concluded the MAT is as good as any and better than most standardized reading tests. C. Alen Riedesel reviewed the mathematics tests and concluded they certainly rate a "better-than-most" label.

CHAPTER 4

PRESENTATION AND INTERPRETATION OF THE DATA

The purpose of this chapter is to present an analysis and interpretation of the data.

The major intentions of this study were to determine the effect of grade retention on achievement in reading and math when the grade was repeated, and to determine the effect of grade retention on achievement in reading and math in the following two grade levels after the grade was repeated.

The data reported in the following sections of this chapter pertain to the six question hypotheses listed in Chapter 1 of this study.

Hypothesis One

The purpose of the first hypothesis was to determine if there would be a change in reading achievement as measured by the MAT for students who are repeating a grade level when the two years were compared.

Table 1 compares the MAT reading scores of students retained in the first grade. The mean percentile score was 12 the first year and 28 after the grade was repeated. There was a gain of 16 percentile points.

Table 3 compares the MAT reading scores of students

retained in the second grade. The mean percentile score was 16 the first year and 41 after the grade was repeated. There was a gain of 25 percentile points.

Table 5 compares the MAT reading scores of students retained in the third and fourth grades. The mean percentile score was 17 the first year and 29 after the grade was repeated. There was a gain of 12 percentile points.

Table 7 compares the scores of all 28 students. The mean percentile score in reading was 14 the first year and 32 after the grade was repeated.

There was a mean increase in reading achievement of 18 percentile points for students who repeated a grade when the two years were compared.

The students retained in the second grade showed the largest gain.

Hypothesis Two

The purpose of the second hypothesis was to determine if there would be a change in math achievement as measured by the MAT for students who are repeating a grade level when the two years were compared.

Table 2 compares the MAT scores of students retained in the first grade. The mean percentile score was 9 the first year and 28 after the grade was repeated. There was a gain of 19 percentile points.

Table 4 compares the MAT math scores of students retained in the second grade. The mean percentile score

was 16 the first year and 42 after the grade was repeated. There was a gain of 26 percentile points.

Table 6 compares the MAT math scores of students retained in the third and fourth grades. The mean percentile score was 22 the first year and 33 after the grade was repeated. There was a gain of 11 percentile points.

Table 7 compares the scores of all 28 students. The mean percentile score in math was 14 the first year and 33 after the grade was repeated. There was a gain of 19 percentile points.

The students in the second grade had the largest gain.

Hypothesis Three

The purpose of the third hypothesis was to determine if there would be a change in mean reading achievement as measured by the MAT for students one grade following retention.

The mean percentile score in reading for first grade students decreased from 28 to 19 one grade following retention. There was a loss of 9 percentile points.

The mean percentile score in reading for second grade students decreased from 41 to 40 one grade following retention. There was a loss of 1 percentile point.

The mean percentile score in reading for third and fourth grade students increased from 29 to 32 one grade following retention. There was a gain of 3 percentile points.

The mean percentile score in reading for all 28 students decreased from 32 to 27 one grade following retention. There was a loss of 5 percentile points.

The only group of students having an increase in percentile points was the group retained in the third and fourth grade.

Hypothesis Four

The purpose of the fourth hypothesis was to determine if there would be a change in mean math achievement as measured by the MAT for students one grade following retention.

The mean percentile score in math for first grade students decreased from 28 to 22 one grade following retention. There was a loss of 6 percentile points.

The mean percentile score in math for second grade students decreased from 42 to 31 one grade following retention. There was a loss of 11 percentile points.

The mean percentile score in math for third and fourth grade students decreased from 33 to 32 one grade following retention. There was a loss of 1 percentile point.

The mean percentile score in math for all 28 students decreased from 33 to 26 one grade following retention. There was a loss of 7 percentile points.

Hypothesis Five

The purpose of the fifth hypothesis was to determine if there would be a change in mean reading achievement as measured by the MAT for students two grades following retention.

The mean percentile reading score for students retained in the first grade decreased from 19 one grade following retention to 18 two grades following retention. There was a loss of 1 percentile point.

The mean percentile reading score for students retained in the second grade decreased from 40 one grade following retention to 29 two grades following retention. There was a loss of 11 percentile points.

The mean percentile reading score for students retained in the third and fourth grades decreased from 32 one year following retention to 30 two grades following retention. There was a loss of 2 percentile points.

The mean percentile score in reading for all 28 students decreased from 27 one grade following retention to 24 two grades following retention. There was a loss of 3 percentile points.

Table 7 shows the reading scores for three of the four groups follow the same pattern. The lowest mean score was in the grade to be repeated and the highest mean score was when the grade was repeated. The scores decreased in the next two grades, but were not as low as they were before

the grade was repeated.

The group of third and fourth grade students had the lowest score before the grade was repeated and increased when the grade was repeated, but the scores did not decrease two grades following retention.

Hypothesis Six

The purpose of the sixth hypothesis was to determine if there would be a change in mean math achievement as measured by the MAT for students two grades following retention.

The mean percentile math score for students retained in the first grade decreased from 22 one grade following retention to 15 two grades following retention. There was a loss of 7 percentile points.

The mean percentile math score for students retained in the second grade decreased from 31 one grade following retention to 27 two grades following retention. There was a loss of 4 percentile points.

The mean percentile math score for students retained in the third and fourth grades decreased from 32 one grade following retention to 26 two grades following retention. There was a loss of 6 percentile points.

The mean percentile score in math for all 28 students decreased from 26 one grade following retention to 20 two grades following retention. There was a loss of 6 percentile points.

Table 7 shows the math scores all follow the same pattern. The lowest mean scores were in the grade to be repeated and the highest mean scores were when the grade was repeated. The mean scores decreased in the two grades following retention, but were higher than before being retained.

The gain or loss in percentile rank points was also listed on Tables 1-6. The range of differences in reading scores after the grade was repeated was from -4 to +54. Two grades later the range of difference was from -16 to +52.

In math the range of difference was from -24 to +66 after the grade was repeated. Two grades later the range was from -20 to +32.

Table 1
First Grade Reading Scores

Student Number	First Time in Grade	Grade Repeated	2 Year Difference	1 Grade Above	2 Grades Above	4 Year Difference
1	7	46	+39	34	16	+ 9
2	16	20	+ 4	8	22	+ 6
3	26	60	+34	10	14	-12
4	10	26	+16	1	6	- 4
5	12	8	- 4	1	4	- 8
6	12	42	+30	38	30	+18
7	10	30	+20	16	16	+ 6
8	10	12	+ 2	10	8	- 2
9	16	36	+20	52	64	+48
10	16	22	+ 6	12	16	0
11	4	20	+16	48	1	- 3
12	24	34	+10	20	40	+16
13	8	48	+40	18	10	+ 2
14	6	6	0	4	6	0
15	10	16	+ 6	14	22	+12

Table 2
First Grade Math Scores

Student Number	First Time in Grade	Grade Repeated	2 Year Difference	1 Grade Above	2 Grades Above	4 Year Difference
1	5	54	+49	34	16	+11
2	2	46	+44	10	14	+12
3	10	40	+30	38	18	+ 8
4	2	32	+30	34	8	+ 6
5	2	20	+18	4	6	+ 4
6	14	50	+36	62	23	+ 9
7	2	28	+26	14	6	+ 4
8	4	12	+ 8	10	26	+22
9	4	24	+20	44	26	+22
10	8	46	+38	28	20	+12
11	24	2	-22	2	4	-20
12	36	12	-24	12	20	-16
13	16	24	+ 8	28	8	- 8
14	6	2	- 4	1	9	+ 3
15	6	24	+18	8	23	+17

Table 3
Second Grade Reading Scores

Student Number	First Time in Grade	Grade Repeated	2 Year Difference	1 Grade Above	2 Grades Above	4 Year Difference
16	10	56	+46	42	20	+10
17	8	38	+30	60	60	+52
18	14	10	- 4	30	28	+14
19	12	23	+11	16	8	- 4
20	23	23	0	16	7	-16
21	14	50	+36	50	38	+24
22	16	70	+54	66	54	+38
23	32	56	+24	42	18	-14

Table 4
Second Grade Math Scores

Student Number	First Time in Grade	Grade Repeated	2 Year Difference	1 Grade Above	2 Grades Above	4 Year Difference
16	14	80	+66	20	16	+ 2
17	28	70	+42	52	38	+10
18	10	38	+28	32	42	+32
19	20	28	+ 8	14	8	-12
20	14	10	- 4	2	5	- 9
21	28	62	+34	56	42	+14
22	12	11	- 1	40	42	+30
23	6	38	+32	34	20	+14

Table 5
Third and Fourth Grade Reading Scores

Student Number	First Time in Grade	Grade Repeated	2 Year Difference	1 Grade Above	2 Grades Above	4 Year Difference
24	4	1	- 3	6	2	- 2
25	6	16	+10	8	12	+ 6
26	32	40	+ 8	54	42	+10
27	28	50	+22	56	80	+52
28	14	38	+24	34	16	+ 2

Table 6
Third and Fourth Grade Math Scores

Student Number	First Time in Grade	Grade Repeated	2 Year Difference	1 Grade Above	2 Grades Above	4 Year Difference
24	6	2	- 4	8	16	+10
25	2	20	+18	12	16	+14
26	18	50	+32	54	28	+10
27	74	86	+12	84	64	-10
28	8	8	0	2	4	- 4

Table 7
Mean Percentile Scores

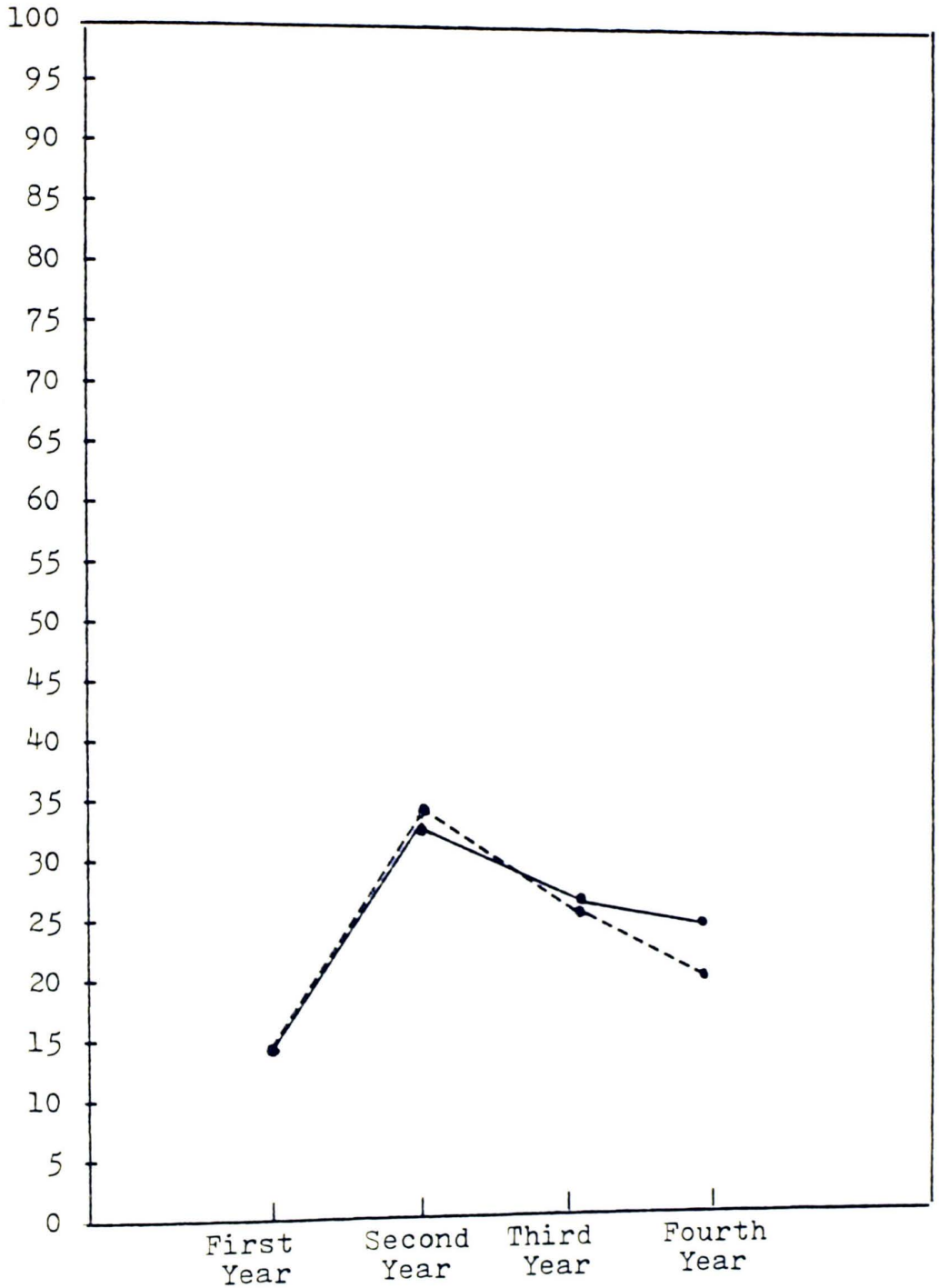
Group	First Time in Grade	Grade Repeated	1 Grade Above	2 Grades Above
Reading Scores				
First Grade Students	12	28	19	18
Second Grade Students	16	41	40	29
Third and Fourth Grade Students	17	29	32	30
All 28 Students	14	32	27	24
Math Scores				
First Grade Students	9	28	22	15
Second Grade Students	16	42	31	27
Third and Fourth Grade Students	22	33	32	26
All 28 Students	14	33	26	20

Table 8

Mean Percentile Scores

Reading —
Math - - - -

Percentile



CHAPTER 5

SUMMARY AND CONCLUSIONS

Summary

The major purpose of this study was two-fold:
(1) to study the effect of retention of students in grades 1, 2, 3, and 4 on their achievement in reading and math when the grade is repeated, and (2) to determine the effect of retention on achievement in the next two grade levels after a grade is repeated.

The population of this study was 28 students attending school in Waverly, Tennessee who were retained in the first, second, third, or fourth grade.

The instrument used to measure achievement in this study was the Metropolitan Achievement Tests.

The findings of this study, grouped according to the six hypotheses, were as follows.

H₁: Will there be a change in mean reading achievement as measured by the MAT for students who are repeating a grade level when the two years are compared?

The researcher found a mean percentile increase from 14 to 32 in reading.

H₂: Will there be a change in mean math achievement as measured by the MAT for students who are repeating a grade level when the two years are compared?

The researcher found a mean percentile increase from 14 to 33 in math.

H₃: Will there be a change in mean reading achievement as measured by the MAT for students one grade following retention?

The researcher found a mean percentile decrease from 32 to 27 in reading.

H₄: Will there be a change in mean math achievement as measured by the MAT for students one grade following retention?

The researcher found a mean percentile decrease from 33 to 26 in math.

H₅: Will there be a change in mean reading achievement as measured by the MAT for students two grades following retention?

The researcher found a mean percentile change in reading for students two grades following retention. The change was from 14 the first time in the repeated grade, to 32 when the grade was repeated. The change was from 32 to 27 one grade following retention, and from 27 to 24 two grades following retention.

H₆: Will there be a change in mean math achievement as measured by the MAT for students two grades following retention?

The researcher found a mean percentile change in math for students two grades following retention. The change was from 14 the first time in the repeated grade, to

33 when the grade was repeated. The change was from 33 to 26 one grade following retention, and from 26 to 20 two grades following retention.

In both reading and math mean percentile scores increased the year students repeated the grade and then decreased the next two grades.

The four year study showed 46 percent of the students scored higher in both reading and math, 7 percent scored higher in one and the same in the other, 36 percent scored higher in one and lower in the other, and 11 percent scored lower in both reading and math.

After the fourth year, only four students in reading and one in math scored more than the 50th percentile or "average." Two other students in reading and three other students in math scored the 40th percentile or better.

Conclusions

The major conclusions of this study were:

1. Students score higher in reading and math the year the grade is repeated.
2. Student scores in reading and math decrease the grade following retention.
3. Student scores in reading and math continue to decrease two grades following retention.
4. Student scores in reading and math remain below average after repeating a grade.

The researcher recommends the development of a policy for grade promotion and retention in Humphreys County Schools, and also teacher training for grade retention.

It is also recommended more research be conducted on grade retention and achievement test scores using a larger population, more recent test scores, longer periods of time, and in areas other than or in addition to reading and math.

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