

THE RELATIVE MERITS OF TEACHING CHILDREN READING IN
A NONGRADED VERSUS A GRADED SCHOOL SYSTEM

by

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CHAPTER I

INTRODUCTION

Justification of the Problem

The tempo of change is rushing forth at an accelerating pace. Fundamental assumptions are being questioned in religion, in war and peace as well as in education. One such assumption in education is the value of the graded school. In the past the graded system has served the educational needs of America well. Today, many educators doubt the adequacy of the graded system in meeting the present as well as future educational needs. Old solutions for new problems will not suffice. Educators are testing new programs and practices to affect fundamental improvement in the schools. Healthy dissatisfactions have led to the belief that if schools are to be significantly better, they will have to be significantly different.

Progress in education has not always come about by the process of adding more teachers, more courses, more books or more money. Real improvement has come from unique uses of scarce human talent, precious time and new methods. Team teaching, programmed learning, television instruction are but a few of the innovations in time and method.

In recent years much has been written in educational journals demonstrating the need for a drastic change in the organizational structure of the American school system. The attention of the general

public and of educators has dwelt on the fast moving innovation of nongradedness in the nation's schools. Many articles and books dealing with educational innovations make direct or indirect references to nongradedness and the inherently flexible, hygienic, and presumably efficient practices with which the term is associated.

The first modern-day case for the nongraded school developed in 1959 with the publication of The Nongraded Elementary School written by two educational giants, Goodlad and Anderson. Since then many other books have been published in support of nongrading, one of the most recent being The Nongraded School Analysis and Study edited by Richard I. Miller.

In evaluating the research on nongrading, Richard Miller stated that one should not be surprised to find conflicting evidence on the superiority of one or the other approaches. Miller concludes that the research conducted on the nongraded school has been, for the most part, weak in design and limited in scope.

Because administrators and teachers have been seeking better ways of developing all phases of growth of children, a variety of plans have been used including the changing of curriculum requirements, the changing of methods of instruction and the changing of school and classroom organization. In the forefront of this endeavor are a variety of nongraded plans of organization. Many positive claims for each plan have been made without much evidence of a preplanned design based on statistical analysis. Therefore, by means of statistical analysis, it was the

purpose of this study to seek additional evidence concerning the effect of nongrading on the reading achievement of pupils as opposed to the effect of traditional teaching on reading achievement. More specifically the primary consideration of this study was to test the following hypothesis:

H: There is no significant difference in the reading achievement of comparable groups of pupils: one of which is taught in a nongraded school system and the other instructed by traditional methods.

Limitations of the Study

This study was limited to the findings obtained from two private schools in central Kansas with pupils of middle socio-economic level. The pupils who participated in this study had attended one school system for six consecutive years. Only one area of achievement, that of reading, was studied.

Definition of Terms

Graded or Traditional School - a grade school organization in which the curriculum is distributed in a series of six or eight grades applicable to all children irrespective of maturity or ability.

Nongraded School - an organized plan which recognized individual differences and helps the child grow in a series of skills in a learning situation suited to his maturity, ability and experience.¹

¹John I. Goodlad and Robert H. Anderson. The Nongraded School (New York: Harcourt, Brace and Company, 1959). p. 5.

CHAPTER II

REVIEW OF LITERATURE

History of Education in America

The history of The American School is one of growth in several dimensions. During colonial days education was scattered, fragmentary, and largely unsatisfactory. Each group of settlers brought with them not only their language, customs and religion, but also their idea of education. This resulted in the development of a number of different educational patterns in various colonies. The American colonists wanted their old cultural patterns to change in a number of ways. Primarily they wanted to have the religious freedom that had been denied them in the countries from which they came. Another major objective which they sought was political liberty.¹

Writing in 1898, William Shearer stated that "all the older schools seemed to have been organized in about the same way and to have been ungraded."² The ungraded school was then, the germinal school from which all others sprang. Instruction was individual and pupils presented themselves for admission into school at anytime during the year.

¹James E. Frasier, An Introduction to the Study of Education (New York: Harper and Row Publishers, 1965), pp. 34-54.

²William Shearer, The Grading of Schools (New York: The H. P. Smith Publishing Company, 1899), p. 21.

A pupil's studies were determined by the books he brought and his first lesson was apt to follow the last one his former teacher had given him.

Shearer listed four advantages of the early colonial schools:

- 1) the instruction was generally directed to one pupil at a time; therefore, it could always be suited to the individual;
- 2) teacher came into close contact with each pupil;
- 3) all lessons could be prepared in school;
- 4) the system favored the formation of habits of self-reliance and independent effort in attacking difficulties as the lessons were learned with but little or no help from the teacher.

Several disadvantages were also apparent. There was no saving of the teacher's time and strength under this system. Secondly, the many mistakes common to all had to be corrected for each pupil separately. Interesting information had to be given as many times as there were scholars, or, as often was the case, omitted altogether. Because many pupils wasted their time, a rigid system of harsh punishment was carried out. Furthermore, the system favored those who were strong, quick and industriously inclined, but depressed the weak and slow. The dullness, weariness, and lack of variety were very marked.³

At the beginning of the nineteenth century there existed a variety of schools to teach different things. The one-room rural school represented the simplest elementary school organization, in which one teacher had complete charge of the school and taught all subjects to all pupils.

³Ibid., pp. 13-14.

In larger cities more advanced schools were of three kinds: Latin Grammar Schools; Writing Schools and English Grammar Schools.

Shermis stated that education (in America) began as the privilege for a fairly small elite. This was especially true of the Latin Grammar School which was specifically planned for an elite percentage of each generation. Between 1738 and 1789 the enrollment of the two Latin schools in Boston never exceeded 202.

The English Grammar and Writing Schools also existed in the larger cities. Both beginners and those who wished a higher degree of proficiency than they were able to achieve at home were sent to these schools. Emphasis on writing was less than on reading in many of the colonies supposedly because reading was more important from the viewpoint of religious instruction. Until trade and industry became important, the religious motive for education was paramount.⁴

The teaching of young children to read and write was for a long time despised as a trivial task and was relegated to the home or the private teacher. From this came the common practice of mothers teaching children to read before sending them to school. The law of Massachusetts stated that "No youth shall be sent to the Grammar Schools, unless they have learned . . . to read the English language by spelling the same."⁵

⁴Samuel Shermis, A Brief Study of American Education (New York: American Book Company, 1965), p. 44.

⁵William M. French, America's Educational Tradition (Boston: D. C. Heath and Company, 1964), p. 11.

Until well into the 19th century these schools were ungraded and the curriculum limited. Individual instruction was the rule everywhere, and dependence on the textbook was universal.

After the Revolution and War of 1812 various solutions to the educational needs of the young republic were offered. William Ellery Channing has described this period as "an age of great movements."⁶

When Joseph Lancaster, an English Quaker, reached the American shores he brought with him a novel idea which came to be known as the Monitorial System. Under this system one teacher would teach several older pupils and they would each teach several other children. Although the Monitorial schools were too mechanical and relied almost exclusively upon memory and repetition, they did serve three purposes: they gave education to thousands of boys and girls who would have otherwise been neglected; they awakened the public to the need for public schools; and they focused attention on group instruction in the place of individual tutoring. The Lancaster system of mutual instruction made a bold bid for acceptance and was given a trial in several American cities, but while it solved the problem of economy, it was not efficient and was soon discarded.⁷

A second movement came with the development of the "Pauper Schools" which provided for the tuition of children of paupers, while all others were required to pay the rates. This plan was tried in

⁶Frederick Eby, The Development of Modern Education (New York: Prentice-Hall, Inc., 1952), p. 566.

⁷William M. French, America's Educational Tradition (Boston: D. C. Heath and Company, 1964), p. 53.

numerous states but encountered many difficulties. The method of deciding who were paupers was a major problem but most objectionable was the stigma with which the children were branded.⁸

As the number of pupils began to increase, a graded system evolved. It became possible for several students to sit on one bench and recite together. Soon the employment of two or more teachers made it possible to divide duties. As the enrollment increased to justify the employment of eight or ten teachers the course of study was further divided into a series of ascending steps, each preparatory to the next. The teachers were assigned definite portions in which they were to instruct their pupils. Under such conditions the pupils could be closely classified, and those about equal in ability and attainment could be instructed together.

So it was that the American people turned to the common school system which taxed all the wealth for the education of all the children. The first noteworthy attempt to give America better schools came under the guidance of Francis W. Parker, superintendent of the Boston schools and Joseph D. Philbrick, principal of the Quincy School. A four story, twelve room structure was constructed to house the primary school, each room having its own teacher. The reading and writing schools were combined in the same grade and gradually, an eight-grade school emerged.⁹

William Shearer wrote:

⁸Ibid., p. 50-51.

⁹William J. Shearer, The Grading of Schools (New York: The H. P. Smith Publishing Company, 1899), p.20.

. . . It was not until 1847 that John Philbrick worked out the details of the first graded school in this country. Gradually, others adopted the plan, and by 1860 the schools of most of the cities and large towns were graded. By 1870,¹⁰ the pendulum had swung from no system to nothing but system.

It is doubtful that Philbrick in creating the pattern of the graded schools was aware that he was setting a style of school organization which was to stand for over a century. Thus one can see from the preceding that the American graded system was not transplanted from abroad but rather, was the result of a growth which continues even today.

The typical graded school of the 1840's roughly classified pupils according to their supposed ability to do the work of a given year. Each class was placed in charge of a teacher who was expected to give the same lesson to all the pupils in the room and who was responsible to the principal of that building. The course of study was arbitrarily divided into a number of parts, each part containing enough work to keep the pupil "busy" for one year.¹¹

The school of this period was described by W. M. French as "a book-centered, curriculum-centered, teacher dominated school."¹² Good scholars were recognized by their ability to memorize verbatim the material in the textbook. Those with poor memories or those who questioned the why of things generally left school at an early age.

¹⁰Shearer, ibid., p. 22.

¹¹Frederic B. Eby, The Development of Modern Education (New York: Prentice-Hall, Inc., 1952), p. 566.

¹²French, op. cit., p. 127.

It soon became evident that the graded school which was intended to serve the children was becoming their cruel master.

Prior to this time, Horace Mann had established the first public normal school in Lexington, Massachusetts. As secretary of the Massachusetts School Board of Education he contributed twelve reports which related the conditions of education in his state and elsewhere and discussed the aims and purposes of public education. L. A. Cremin believed that "Mann understood well the relationship between freedom, self-government, and universal education."¹³

Other innovations and reforms of which Mann spoke were: higher standards for the training of teachers; the placing of a library in every school; introduction into the curriculum of vocal music, History, Geography, Physiology and Hygiene, and Moral instruction. He was a strong advocate of the enactment of stringent laws against child labor and the lengthening of the school year to ten months. In 1852 Mann learned of the practice of compulsory attendance in Germany and urged it upon Massachusetts. Mann's attempts to alter tradition were met with bitter controversy and furious opposition from many Boston school masters.

By the end of the 19th century, education in America consisted of a series of superimposed institutions all graded and articulated. These were: the kindergarten; the primary school; the grammar school; the four year high school, and the four year college. This educational

¹³ Lawrence Cremin, The Transformation of the School (New York, Alfred Knopf, 1961), p: 9.

pyramid was a result of a lengthy process of adjustment and only gradually appeared as an integrated system.¹⁴

Just as American education has seen several conflicting trends in school organization, curriculum planning has also undergone basic changes over the years. Significant movements in curriculum construction began about 1920 and lasted for several years. An attempt was made to produce in book form a course of study that could be followed by all teachers in all grades. On the surface this seemed a good idea since each teacher would know at the beginning of the year what he was expected to do for the year, and supervisors could better assist all teachers. The attempt to prescribe a fixed, universal, course of study for each grade as an educational guide to teachers was doomed to failure because it placed emphasis on static, fixed particles of subject matter to be purveyed to all pupils.

At this time two major developments had a great impact on the school curriculum and organization. The first was the child-centered movement brought about by the findings of child psychologists and child-study centers. These findings emphasized individual differences with special stress on the basic needs of each child and the development of the total personality. The second was a reaction against the subject-centered, lock-step curriculum of the past. The curriculum planning that followed was an attempt to secure appropriate subject content related to the needs and interests of children of different age levels.

¹⁴Eby, *op. cit.*, p. 564.

Today many courses of study are still being written but with little resemblance of that of the '20's. Piecemeal lessons are being replaced by large units which act as a guide to the teacher rather than a requirement. Each teacher interprets the course of study in terms of the children under his direction and their previous experiences. What happens to the course of study is of little importance; what happens to the children is of supreme importance.¹⁵

By 1945, Americans were beginning to ask themselves the question, How under the existing democracy can we: 1) continue to lead the world as an industrialized, democratic society, and, 2) develop the talents of all our children?

It became obvious in the days following World War II that America was destined to lead the Western World against the aggressive international communistic movement. Other changes that came about during this period were: The arrival of large numbers of European immigrants who crowded our elementary schools; technological advances which made education more important; and the questioning of tried arrangements of educational practices.¹⁶ The road was again open for much experimentation.

It has been found that the nongraded school was the germinal school from which all other schools spring. The school system advanced as need and times demanded. As the number of pupils increased, a graded school system evolved and by the 19th century education in America consisted of an educational pyramid.

¹⁵Frasier, op. cit., pp. 173-175.

¹⁶Shermis, op. cit., p. 37.

Two major developments, namely, the Child Centered Movement and the subject centered, lock-step curriculum brought about the study for better schools in America.

Development of a Nongraded System in the United States

Credit for being the first American educator to voice loud protests against the lock-step method of teaching was given to Preston W. Search, superintendent of schools in Pueblo, Colorado, from 1888 to 1894. Search argued for complete individual progress for each student and put his ideas into practical application during his tenure as superintendent in Pueblo and later in Los Angeles by introducing radical changes at the high school level. His plan provided a complete outline for each subject so that each pupil might progress at his own rate. Pupils were required to complete all units in each course but at their own rate. Teachers' records indicated the number of units completed by each student but grades were not given. Emphasis was upon individual work and progress rather than group work and group progress. While this plan was applied most exclusively in high school, Search believed that it could be implemented in the elementary school.

It is difficult to assess to what extent the basic principles of this plan were utilized in other cities but one can suppose that its influence had a considerable impact upon the programs and thinking found

in subsequent deviations from group-centered educational practices. A close look at the work done later by Morrison at the University of Chicago High School, the program developed under the name of the Dalton Plan, and the plans developed by Frederick Burk in San Francisco and Carleton Washburne at Winnetka, Illinois, reveals many interesting parallels to the pioneer enterprise of Preston Search.

The Dalton Plan was first introduced in 1919 by Helen Parkhurst in an ungraded school for crippled children. The following year it was adopted by a high school in Dalton, Massachusetts, from which it took its name.

The Dalton Plan divided subjects into academic and vocational groups. The academic subjects were organized sequentially and allowed students to progress on an individual basis. The individual job-sheet-unit conference technique was employed. Learning tasks were identified for each pupil permitting him to progress to the completion of his requirements which were then checked in a conference with his teacher. The nonacademic part of the curriculum was taught by class or group methods. There were specialized teachers and facilities, and students were grouped on a nongraded basis. Pupils had freedom of choice regarding the units of work they undertook but were required to complete the corresponding grade-level units for each subject before moving on to more advanced work.

The Winnetka Plan was very closely related to the Dalton Plan. It derived its name from the work of Carleton Washburne in Winnetka,

Illinois, where he carried on the ideas introduced by Frederick Burk in California. As in the Dalton Plan, the individualized task approach was emphasized. Extensive development of this idea was also pioneered in Chicago, Illinois by James E. McDade and in Bronxville, New York, by Willard W. Beatty.

The Winnetka course of study was divided into two parts. The morning and afternoon were devoted to two types of activities. In the morning pupils studied the "common essentials" which consisted of the knowledge and skills which everyone was expected to master. In this phase of the program, pupils worked on individual assignments at their own rate. Tests were administered periodically to measure academic achievement. Established standards had to be met before successive units of work could be undertaken. The second part of the day was devoted to "group and creative activities" such as literature, music, art, physical education, and manual arts. Self-expression and the individual development of interests and abilities were stressed with no specific standards to be met.

The Appleton, Wisconsin Public School System made a twenty year study of the failure situation in its elementary schools which resulted in the organization of three blocks of time (Kindergarten-Primary-Intermediate) which allowed for a flexible program with varying patterns and uneven tempos of growth. Records from the elementary department show that from 1885 to 1917, numerical markings were used to communicate the progress of each pupil to the parents. Between 1917 and 1922, Excellent, Very Good; Good; and Fair were used to show the pupils' growth. From

1922 to 1936 letter grades were given. These three marking systems were based on fixed standards for all children. These standards did not take into consideration the individual differences in capacity. It was thus impossible for a great many children to achieve success in a realistic sense so that from 1936 to 1947 pupils were given ability markings: Unsatisfactory; Satisfactory; Improving. This was the first attempt to report each child's performance in relation to his own ability. Misuse and misinterpretation by many teachers and parents soon warranted another type of card. From 1947 to 1951 a Check System was used as an attempt for more individual analysis.

The Check System was replaced in 1951 by the parent conference and Progress Reports. This reporting procedure was an attempt to provide more formal contacts with parents during the school year and to give parents more concise information on the progress reports. The administration of the Appleton Public Schools stated that since the flexible organization was put into operation, failure rates were greatly reduced and that when children were given a longer time for the uneven tempos of their growth to manifest themselves, better decisions were made and grouping was greatly improved.¹⁷

In 1936 the Flexible Progress Plan at Western Springs, Illinois, had its beginning. This program initiated differentiations in the

¹⁷ Appleton Public Schools, "History and Development of Our Continuous Progress Plan," (Appleton, Wisconsin, Appleton Public Schools Elementary Department, 1962), pp. 1-7. (Mimeographed)

teaching procedures of reading. Other nongraded programs developing in the early 1940's were in Athens, Georgia; Peloske, Michigan; Glencoe, Illinois; and Cleveland, Ohio.

Lowell P. Goodrich began the Milwaukee, Wisconsin, nongraded primary in 1942. Today, under the supervision of Florence Kelley, this plan is known as the oldest continually operated nongraded primary school system in America. At present all but one of the one hundred and thirty-three elementary schools in Milwaukee are nongraded.

Generally speaking, except for a few scattered efforts, the nongraded school had been in existence only since the end of the Second World War. Between 1947 and 1950 the movement spread slowly. By 1955, however, considerable momentum had been gained as indicated by the frequency with which professional journals and educational literature focused attention on nongrading.

Goodlad and Anderson compiled a survey in 1960 of practices in eighty-nine communities in which there were reported to be some 550 nongraded schools. The authors of this report stated that the data gathered in the survey was not necessarily objective or fully representative of what was happening in schools labeled "nongraded". The survey revealed that no systematic data on pupil achievement had been used in a comparative study with results obtained from graded schools. To the question, "How much confidence did the respondents have that there actually were differences between the graded and nongraded groups" most replied, "no information."¹⁸

¹⁸Robert H. Anderson and John I. Goodlad, "Self-Appraisal in Non-graded Schools: A Survey of Findings and Perceptions," Elementary School Journal, LXII (February, 1962), pp. 261-269.

Other surveys were compiled by the United States Office of Education in 1960, in which Stuart Dean reported in the National Education Association Research Division questionnaire survey of 1960, that eighteen per cent of the elementary schools in this country were using the non-graded primary. Questions were sent to 1,495 urban school districts regarding the extent to which nongraded plans were in use. Out of 819 replies, seventy-one reported the use of a nongraded plan.

In regard to the present status of the nongraded movement David Beggs wrote that "today we have come to a point in time where the vast majority of nongraded programs are in the cocoon stage."¹⁹ In many cases nongrading exists in only one area of the curriculum, that of reading. Many educators believe that one of the chief reasons for today's stormy educational climate is the failure of educational researchers to uncover techniques for predicting the ability of students to do school work on the basis of evidence other than age. In his recent book, The Appropriate Placement School, Frank Brown writes:

Graded schools emphasize an analytic approach to learning, which proceeds in an orderly fashion one step at a time. Each step is specifically related to the previous step. This kind of teaching is easily handled by the schools since each step is exact and has clear limits. The analytic approach is such a well defined process that practically all graded school curricula are based on it; the very simplicity of its step-by-step approach has caused schools to saddle themselves with sequential one step-at-a-time teaching. Current research is beginning to report that most learning is not sequential at all. New material based on major principles which may not be sequential in either detail or ideas

¹⁹David W. Beggs and Edward G. Buffie, Nongraded Schools in Action (Bloomington: Indiana University Press, 1967), p. 21.

are needed to interest and challenge the student's creative imagination.²⁰

The NEA Educational Research Service made a postal-card survey in 1964 to determine the number of large urban school systems having a nongraded or partially nongraded elementary or secondary schools. Questionnaire cards were sent to 441 school systems with enrollment of 12,000 or more; replies were received from 353, or 80.0 per cent.

Twelve per cent of the school systems included in the survey indicated nongrading in all their elementary schools, although not all grades in each school were replaced by nongrading. Table I shows that grades one, two, and three are the most frequently replaced by a nongraded system. Of those school systems responding to the ERS Survey only 3.4 per cent, or twelve systems reported nongrading in the secondary schools.²¹

A survey now being processed for publication in 1968 by the National Elementary Principal magazine indicates that nongraded plans are still being employed mainly on the primary level. Table II shows the results of this survey.

Unquestioned credit must be given to Preston W. Search for helping to throw off the lock-step method of teaching. It is true that many plans have been brought forward since his innovations of individual

²⁰Frank Brown, The Appropriate Placement School: A Sophisticated Nongraded Curriculum (West Nyack, N. Y. Parker Publishing Company, Inc., 1965), p. 33.

²¹Richard I. Miller, The Nongraded School Analysis and Study (New York: Harper and Row, Publishers, 1967), pp. 157-162.

TABLE I
 ELEMENTARY GRADES REPLACED BY NONGRADED
 SEQUENCES AS REPORTED BY 114 SCHOOL
 SYSTEMS WITH SOME NONGRADING
 IN 1963-1964^a

Grades replaced	Enrollments of school systems				
	Total strata 1-4	1-100,000 or more	2-50,000 or 99,000	3-25,000 or 49,999	4-12,000 or 24,999
Number of systems reporting	114	11	21	28	54
Primary*	3.5%	--	14.3%	--	1.9%
K-2	0.9	--	--	3.6%	--
K-3	8.8	9.1%	14.3	3.6	9.3
1-2	5.2	9.1	4.3	10.7	1.9
1-3	64.9	54.5	37.9	71.3	74.0
1-4	1.8	9.1	--	--	1.9
1-6	5.2	--	14.3	3.6	3.6
1-8	2.6	--	4.8	3.6	1.9
2-6	0.9	--	4.8	--	--
Mixed	4.4	18.2	4.8	--	3.6
No data given	1.8	--	--	3.6	1.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%

^a Richard I. Miller, The Nongraded School Analysis and Study (New York: Harper and Row, Publishers, 1967), p. 161.

* Not defined by reporting systems.

TABLE II
 REPORT MADE BY THE NATIONAL ELEMENTARY PRINCIPAL
 INDICATING NONGRADED PLANS USED ON
 DIFFERENT LEVELS IN 1968

First Year	11.2%	Fourth Year	3.6%
Second Year	10.7%	Fifth Year	3.1%
Third Year	9.6%	Sixth Year	3.3%

differences but are they being further developed? Many ways have been followed in reporting to the parents and several movements have spread slowly but by 1955 more attention had been given to the nongraded school. This program is still in the cocoon stage waiting for someone to set it free so that our pupils in America will be free to go searching for the truths which have lain dormant for so long in the minds of the young.

The great enigma confronting education is the puzzle of how ordinary teachers can teach ordinary students in an extraordinary way. New developments have changed the function of the teacher. Instead of teachers controlling the classroom by asking questions to which he has routine answers, his task is to develop profound questions which involve the major themes that hold the subject together. Questions are carefully designed to encourage students to search on their own. Educators are looking toward nongrading as a possible way of allowing students to search on their own. The following comparison shows how graded and nongraded structures differ.

Differences in structure:²²

Graded Structure

1. It is assumed that all children of the same chronological age will develop to the same extent in a given period of time.
2. A child who does not measure up to adult standards of what should be accomplished in nine months is called a failure.
3. If a child "fails", he is required to repeat the grade in which he did not meet the standards.
4. A decision as to grade placement must be made after each nine months.
5. Grade placements are based too largely upon academic achievement.
6. Fixed standards of achievement with a set time put pressures upon teachers and children which cause emotional tensions and inhibit learning.

Continuous Progress

1. We assume that each child has his own pattern and rate of growth, and that children of the same age will vary greatly in their ability and rate of growth.
2. No child is ever considered a "failure". If he does not achieve in proportion to his ability, we study the cause, and adjust his program to fit his needs and problems.
3. A child never repeats. He may progress more slowly than others in the group, but individual records of progress make it possible to keep his growth continuous.
4. Decisions as to group placement can be made at any time during the 3-year period (for social or emotional adjustment, an additional year if needed, etc.).
5. Group placement is flexible, based upon physical, mental, social and emotional maturity.
6. Elimination of pressures produces a relaxed learning situation conducive to good mental health.

²²Appleton Public Schools, History and Development of Our Continuous Progress Plan (Appleton, Wisconsin, Appleton Public Schools Elementary Department, 1962), p. 12. (Mimeographed.)

Studies Related to Nongrading

Very little research data or evaluative evidence is currently available by which the academic world can assume a definite position with regard to nongrading. Goodlad and Anderson, two outstanding advocates of nongrading, wrote that, "there is no evidence to suggest anything."²³

In the following section the writer attempted to present a few of the studies relating to nongrading. Studies in areas other than reading were included because of the scarcity of data directly related to reading.

Provus studied the effects of nongrading in arithmetic on fourth, fifth, and sixth grade students and found that the superior students profited most from nongrading and that the attitude of children toward arithmetic was the same under either method. He found that teachers preferred the nongraded approach.²⁴

The reading achievement of matched groups of 180 fifth grade students and 226 sixth graders was compared by E. F. Morgan and G. R. Stucker. Pupils were assigned to self-contained and ability grouped reading classes. At the end of one year the fifth grade class grouped for reading on the basis of ability was superior in reading achievement

²³Robert H. Anderson and John I. Goodlad, "Ungrading the Elementary Grades," NEA Journal, XLIV (March, 1955), pp. 170-171.

²⁴M. M. Provus, "Ability Grouping in Arithmetic," Elementary School Journal, LX (April, 1960), pp. 391-398.

to the self-contained classes at the .01 level of confidence. At the sixth grade level the ability groups were superior to the self-contained groups at the .05 level of confidence.²⁵

An investigation was undertaken by M. K. Skapski to determine whether second and third grade pupils who were involved in a nongraded program in reading achieved better than did pupils in a graded program and whether in such a program achievement in reading was superior to achievement in other areas. Results of this study showed that pupils in the nongraded program were significantly superior in reading to a matched group of pupils in a graded program. The reading achievement of the nongraded group was significantly superior to the arithmetic and spelling achievement.²⁶

The effects of a nongraded primary cycle on the achievement of third grade pupils at the termination of the cycle were investigated by Ingram. The nongraded pupils were compared with former pupils in the school who had been taught under the graded organizational pattern and with other contemporary pupils in the same city who were completing the primary grades in schools featuring the graded structure. The pupils in the nongraded program were superior in achievement to the former and contemporary pupils in graded classrooms in paragraph meaning; word

²⁵E. F. Morgan and G. R. Stucker, "The Joplin Plan of Reading vs. Traditional Method," Journal of Educational Psychology, LI (April, 1960), pp. 69-73.

²⁶M. K. Skapski, "Ungraded Reading Program: An Objective Evaluation," Elementary School Journal, LXI (October, 1960), pp. 41-45.

meaning; spelling and language at the .01 level of confidence.²⁷

A comparative study on the arithmetic achievement of fifty third graders in a nongraded school with fifty pupils in a graded school was undertaken by Richard Hart. Pupils from the two schools were matched on the basis of sex, age, intelligence and socioeconomic status. His findings indicated a significant superiority in arithmetic achievement for the nongraded pupils.²⁸

Koontz studied achievement as a function of grouping by comparing the achievement of fourth grade pupils enrolled in homogeneously and heterogeneously grouped classrooms. Strictly speaking, this was not a study of nongrading but because the homogeneous groups were permitted to progress at their own rate, the study has been included in the review. Utilizing a level of analysis of variance design the investigator found that the heterogeneously grouped pupils were significantly superior to the homogeneously grouped pupils in the areas of reading and arithmetic. The difference in language was not significant.²⁹

The spring achievement test scores of first, second and third grade pupils in a school which had inaugurated a nongraded program the

²⁷V. Ingram, "Flint Evaluates its Primary Cycle," Elementary School Journal, LXI (November, 1960), pp. 76-80.

²⁸Richard Hart, "The Nongraded Primary School and Arithmetic," Arithmetic Teacher, IX (March, 1962), pp. 130-133.

²⁹W. F. Koontz, "A Study of Achievement as a Function of Experimental Education," Experimental Psychology, XXX (December, 1961), pp. 249-253.

previous fall with the spring achievement test scores of the previous school year when the school was organized solely on the basis of the traditional graded structure was made by Joseph Holliwell. Findings of this comparative study indicate that pupils in the first grade obtained significantly higher achievement scores in word knowledge and reading comprehension than did the graded pupils.

Analysis of the data on the second grade level indicated that, although the nongraded pupils attained higher achievement scores than the graded pupils in every subject area but word discrimination, only in the area of arithmetic was the difference significant at the .05 level of confidence.

Data yielded at the third grade level revealed that nongraded pupils attained higher mean achievement scores than graded pupils in every subject area tested but only three of these differences were statistically significant. The difference favored the nongraded group in arithmetic computation and spelling on the .01 level of confidence and in arithmetic problem solving on the .05 level of confidence.³⁰

M. Hillson randomly assigned first grade students entering the Washington Elementary School for the academic 1960-61 year to either experimental or controlled groups. This design was stretched over a

³⁰ Joseph W. Holliwell, "Comparison of Pupil Achievements in Grade and Nongraded Classrooms," Journal of Experimental Education, XXXII (Fall, 1963), pp. 59-64.

three year period. Analysis of reading achievement favored the non-graded organization at a level that was statistically significant.³¹

In his research on nongrading, Robert F. Carbone came to a less favorable conclusion. He tested 122 matched pairs of pupils in grades four, five and six from four school systems, two with a nongraded primary and two without. Results show that the graded pupils tested higher in six areas of achievement: vocabulary, reading, comprehension, language, work-study skills, arithmetic and total achievement. The graded pupils also scored higher in social participation, but in freedom from emotional instability, freedom from feelings of inadequacy, freedom from nervous manifestations, and personal relationships there was no significant difference between the two groups.³²

A comparative study of achievement scores obtained by children in a nongraded school as opposed to those in a traditional school was reported to an unpublished research report by Eunice Schmidt and Bruno Pierini. The study was conducted in the Edmonds, Washington School District, and compared achievement, pupil motivation, discipline and behavioral change; and home-school contacts of pupils in nongraded programs. Students from both systems were tested either on the California Achievement Test or the Sequential Tests of Educational Progress.

³¹Maurie Hillson, J. C. Jones and J. W. Moore, "A Controlled Experiment Evaluating the Effects of a Non-Graded Organization on Pupil Achievement," Journal of Educational Research, LVII (July-August, 1964), pp. 548-550.

³²Robert F. Carbone, "A Comparison of Graded and Nongraded Elementary Schools," (unpublished dissertation, The University of Chicago, 1960),

On the California Achievement Tests pupils in the nongraded program achieved significantly higher scores in seven of the ten tests. On the Step tests the nongraded group scored significantly higher on four of the five tests.

In the areas other than achievement evaluated in the study, it was found that there was little difference in the estimates of pupil motivation made by the teachers in the experimental as compared to the control school; there was little difference in the discipline problems reported; and the graded school was in more frequent contact with the parents.³³

In evaluating the research done on nongrading, Richard Miller stated that one should not be surprised to find conflicting evidence on the superiority of one or the other approaches. Despite the finest tests and the wisest testers, differences in the nature of communities are inevitable.

Miller believes that a genuine problem in assessing nongradedness is the quality of contemporary tests. The graded approach tends to emphasize that body of knowledge which is closer to the convergent feedback that typifies most achievement tests. The nongraded movement tends to emphasize divergent thinking, which may place the nongraded student at a slight disadvantage. This point is backed by research which indicates that students in a graded situation tend to perform significantly higher than nongraded students in science and mathematics.

³³Eunice Schmidt and Bruno Pierini, "A Study Done to Compare the Achievement of a Nongraded School with the Achievement of Children in Traditionally Graded Schools," (unpublished research report, Edmonds, Washington School District, 1953).

Because most of the research available was done by doctoral students and other by individuals with little previous experience in research, Miller concluded that the research conducted on the nongraded school has been, for the most part, weak in design and limited in scope. It is possible that a team approach of research experts and persons with experience both in a graded and nongraded system would be more effective in evaluating.³⁴

³⁴Miller, op. cit., p. 145.

CHAPTER III

Procedure

Sampling

The nongraded school system was studied by selecting students from St. Mary's School in Derby, Kansas. The criterion used in selecting the student sampling was attendance at the St. Mary's School for six consecutive years. This assured a continuity of instruction in a nongraded curriculum for a period of six years. No attempt was made to match participants on the basis of intelligence, age, or sex.

Derby, Kansas, a suburb of Wichita, is a growing community of about 7,500 people. The economy of Derby is, to a large extent, related to the aircraft industries and McConnell Air Force Base. Indicators are that the activities of those complexes are on the increase and that growth in the future is assured.

One will find that on documents and other official papers, the town bore the name El Paso, until 1955, when it was legally changed to Derby.

There was an enrollment of 5,000 at that time of the study in the Unified School District consisting of ten schools, one of which is located on the McConnell Air Force Base. The St. Mary's Elementary School, with a total enrollment of three hundred and thirty-five completes the educational system of Derby. The largest industry in Derby is the Sterling Manufacturing Company.

Wichita, located thirteen miles north, has been an asset to Derby with recreational advantages, art gallery, symphony, future zoo and K-15, a four lane highway, which provided access for workers to Wichita with suburban living in Derby. The Wichita State University has been a "power station that generates understanding and knowledge"¹ in Sedgwick County. At present, enrollment numbers some 15,000 students. Sacred Heart College, also located in Wichita, has a student enrollment of five hundred forty-three.

St. Mary's School was built in 1954 and had six classrooms. In 1957 four classrooms were added allowing for a capacity of some 350 students. This number is frequently exceeded.

The school was very traditionally constructed and all classrooms were built for self-contained atmosphere. A large all-purpose room has served as a library with sections used for art, music, and other group activities.

The faculty of St. Mary's school consisted of six Sisters of St. Joseph of the Diocese of Wichita and five lay teachers. Two priests taught five religion classes daily. Other volunteer help consisted of some forty women from the parish who provided para-professional aid to the faculty. Areas of volunteer work included nursing, library, school office and teacher aides who checked papers, typed and moderated the Junior Great Books program.

¹Emory Lindquist, "The University's Vocation-on the Cutting Edge of Change," Wichita Trends, XLIV (September 1967), pp. 29.

Since 1966 the services of a reading specialist who teaches corrective or remedial reading to some forty students have been available. At the time of this study, ten students are receiving the services of a speech therapist made available through the Public School System. Public Law 89-10 made possible the services of a psychologist on a weekly basis.

Built on the Catholic philosophy of education, the curriculum of St. Mary's aimed to plan and organize experiences which would bring about in the student the proper outlook on life, in his threefold citizenship in the family, the church, and the state. Each subject in the curriculum has made its contribution toward the attainment of the goals of Christian education to the extent that it has been true to its principles and has properly related to the sum total of truth.

The first steps taken in changing St. Mary's to a nongraded school began in the spring of 1960 with an orientation program for the introduction of the nongraded primary and departmentalizing grades six, seven, and eight. The nongraded primary program began officially in the fall of 1960. In the fall of 1961 parents of children in grades five to eight were given a choice for teachers to diagnose and correct weaknesses in the areas of mathematics and reading or to have the children continue to be self-contained. Parents elected to ungrade in these two areas.

In-service training and study on nongrading continued. Part of this training included visits to various nongraded schools and

attendance by some of the faculty at the SRA Institution for Nongraded Schools in November of 1966.

In 1966 St. Mary's became an experimental school for the Diocese of Wichita. In 1967, the UCLA Experimental School in Los Angeles was visited by the principal. This afforded an opportunity to meet Dr. John I. Goodlad and observe some fine team teaching as applied to nongraded schools.

St. Mary's is presently hoping to build a gym-social center, thus giving the school additional space and facilities. The St. Mary's plant has been an excellent example of what can be done in nongrading while using a small traditional plant.

The Seven Dolors School in Manhattan, Kansas, compared in social-economic and educational opportunities which were similar to Derby, Kansas. For this reason the graded school system was studied by selecting students from Seven Dolors School in Manhattan, Kansas. The criteria used for this sampling was attendance at Seven Dolors School for six consecutive years. This assured a continuity of instruction in a graded school curriculum for a period of six years. No attention was paid to sex, age, or intelligence.

Manhattan, Kansas, the home of Kansas State University, has been one of the outstanding educational institutions in the world. The population of Manhattan at the time of this study was approximately 33,570 including 11,300 university students. This city has been nationally recognized for its fine educational institutions from kindergarten to Ph.D. Nine grade schools, one junior high and the Manhattan High School

comprised the public school enrollment of 5,599. A parochial school program, Seven Dolors Grade and Luckey High (total enrollment, 730) completed the city's school program.

The stabilized economy of Manhattan has been based primarily upon Kansas State University, agriculture, Fort Riley, tourist or convention visitors. The construction industry has also been a major factor in Manhattan's economy.

Seven Dolors Grade School was first known under the name of Sacred Heart Academy which was founded by Rev. J. M. Reade in 1908. He purchased the Colonel Anderson property in June, 1908 for parochial school purposes and was able to open the school by September, 1908. Less than thirty families made up the parish. The purchase price was \$14,000 exclusive of improvements and equipment.

Six Sisters of St. Joseph from Concordia, Kansas, were in charge of the school. Complete courses from kindergarten to the eighth grade were offered in the grade school. Four rooms were available for the classes, each with its own teacher.

In 1938 a building which had been owned by the Methodist Church was purchased and the grades were moved to that building. At this time four sisters were on the faculty with part-time teachers from the Kansas State College teacher training course assisting them.

The enrollment in 1908 was twenty-two while in 1939-40 there were one hundred and four in the grade school. At the time of this study the enrollment was four hundred four, with nine sisters and nine lay faculty members.

For forty-two years the grade and the high school bore the name of Sacred Heart Academy. In 1950, at the request of the parish consultants, the high school was officially designated the "Monsignor Luckey High School" and at the same time the grade school was named the "Seven Dolors Grade School." Monsignor Luckey worked as pastor and superintendent from 1913 until his retirement in 1954 and the grade school took the name of the parish--namely, Seven Dolors. The school is now in its sixtieth year of existence.

In 1955 the present Seven Dolors grade school was built on the same site as the old Academy. The present building is a well built modern structure consisting of cafeteria, auditorium, library, offices, counseling rooms, work rooms and faculty lounge in addition to fourteen classrooms. Seven Dolors School emphasizes the need of moral and religious principles in our American educational system.

Description of the Sampling Population

Twenty students from the Derby school were chosen on the basis of six years consecutive attendance at the St. Mary's School in order that a continuity of instruction in a nongraded curriculum be assured. Forty-seven students were enrolled in the sixth grade of the Seven Dolors School for the fiscal year of 1967-68. Of these, thirty had attended the Seven Dolors School for six years. A random selection of twenty students was made from this group irrespective of sex, age or intelligence. Intelligence scores taken from the results of the Otis Quick Scoring Mental Ability Test which had been administered to all

students while in grade four, rendered a mean of 110. The mean for the nongraded sampling was 119 taken from fifth year scores on the Lorge-Thorndike Intelligence Tests for level three. According to the examiner's manual for the Lorge-Thorndike Tests the correlation with three other well-known group tests of intelligence was rather low. The correlation on the Verbal Battery is .77, .79, and .84. The Nonverbal Battery correlation is .65, .71, .74. Because of the difference in mean scores of the two groups a t-test was employed. The analysis showed that the mean difference was nonsignificant ($t = .184$). Thus, both sampling groups were considered equal in ability even though mean scores showed one group to be of superior ability. Table III shows intelligence scores, age, and sex of the sampling.

The educational background of the parents of students involved in the experiment were also studied. As shown on Table IV, parents of both groups have similar educational experience.

Table V shows that the family status of both populations were comparable.

Description of Measuring Devices Employed

In order to better assess the general reading ability of students participating in this study the writer believed it necessary to test silent reading ability as well as oral ability. The Gray Oral Reading Tests were selected because of their twofold function: first, to provide

TABLE III

INTELLIGENCE SCORES OF THE GRADED AND NONGRADED
PUPILS PARTICIPATING IN THE STUDY

	Graded*			Nongraded**	
	IQ	Age		IQ	Age
<u>Boys</u>					
N-9	124	11	N-8	138	10
	123	11		129	10
	116	11		128	12
	113	11		123	11
	112	11		122	11
	112	11		117	11
	109	11		110	11
	108	11		110	10
	107	11			
<u>Girls</u>					
N-11	121	11	N-12	127	11
	120	11		124	10
	118	11		123	11
	111	11		123	11
	110	11		121	11
	108	11		120	11
	106	11		120	11
	106	11		118	10
	103	11		113	11
	103	11		111	11
	100	11		108	11
	*Group Mean	111.5		11	**Group Mean

TABLE IV
 EDUCATION OF PARENTS OF CHILDREN OF GRADED
 AND NONGRADED SAMPLING POPULATION

	<u>Graded</u>		<u>Nongraded</u>		
	Father-Mother		Father-Mother		
Ph.D.	1	0	0	0	
Master's	1	0	1	0	
College	four	5	4	6	2
	three	0	0	1	1
	two	4	2	2	2
	one	0	0	1	0
High School	four	7	13	9	14
	three	0	0	0	0
	two	1	1	0	0
	one	0	0	0	0
Eighth grade or less	1	0	1	1	

TABLE V
 FAMILY STATUS OF CHILDREN OF THE
 GRADED AND NONGRADED SAMPLINGS

	Parents together	Parents separated	Average No. of children per family
Graded	20	0	5
Nongraded	19	1	5

an objective measure of growth in oral reading; and second, to aid in the diagnosis of oral reading difficulties.

The Gray Oral Reading Tests first published in 1915 were planned and developed by William S. Gray. The tests, available in Forms A, B, C, and D were revised in 1963 by Helen M. Robinson and William Gray of the University of Chicago. The Bobbs-Merrill Company, Inc., publishes this individual oral reading test.

Grade norms for grades one through twelve were provided for each sex. The inter-correlations among grade scores on the four forms were in the vicinity of .98 which indicates that there is a consistency of performance on the four forms.

The tests' claim for validity rests on the steps taken in its construction and in its content. Albert J. Harris, in evaluating this

test, stated that the scoring procedure and method of analysis provided were appropriate for the purpose of the test.

The information about reliability which appeared in the manual was given mainly in terms of standard error of measurement which ranged from 1.98 raw score points for the girls on Form A to 4.59 points for girls on Form B. Harris believed these standard errors compared favorably with the available data on other oral reading tests.²

The Gray norms thus far have been tentative indicating a need for further evaluation and research. The norms were based on results obtained by administering all four forms of the test to five hundred and two boys and girls in grades one through twelve from two school districts in Florida and several suburb and metropolitan public schools in Chicago. Attempts were made to select "average readers" from each given grade but the average mental level of subjects in each grade tended to fall near the upper limits of the normal range.³

Paul R. Lohnes, Associate Professor of Education at the State University of New York, in referring to the Gray Oral Reading Test stated that:

²Albert J. Harris, "Oral Reading," The Sixth Mental Measurement Yearbook (New Jersey: The Gryphon Press, 1965), pp. 1130-1131.

³Emery P. Bliesman, "Oral Reading," The Sixth Mental Measurement Yearbook (New Jersey: The Gryphon Press, 1965), pp. 1129-1130.

These are excellently prepared tests which are particularly useful in the instrumentation of educational research into reading and its correlates, and in adding the dimensions of oral reading scores to the cumulative school record on which research is frequently based.⁴

The Nelson Silent Reading Test, Forms A and B, was first published in 1931. The present revision (1962) entitled the Nelson Reading Test, is a direct outgrowth of the earlier editions and contains entirely new norms based upon a nationwide standardization sample.

There are two comparable forms of the revised test, each containing 175 items. One hundred items measure reading comprehension. Each reading-comprehension paragraph is followed by three questions, one pertaining to its general significance, one to knowledge of detailed information contained therein, and one planned to assess the ability to predict probable outcomes from the situation depicted in the paragraph.

The Nelson Reading Test, designed for use in grades three through nine, has a normal working time of thirty minutes. Answer sheets are available for either hand-scoring or IBM machines.

The test was standardized by stratification of regions in the country followed by a random selection within the size and regional strata. Both Form A and Form B were administered to the same students

⁴Paul R. Lohnes, "Oral Reading," The Sixth Mental Measurement Yearbook (New Jersey: The Gryphon Press, 1965), pp. 1131-1132.

in each of grades three through nine. The reliability coefficient on the sixth grade level was .87 for the vocabulary and 1.85 for the paragraph.

In an effort to obtain evidence of congruent validity, the Nelson Reading Test was administered with the Iowa Test of Basic Skills. Pearson-product-moment correlations were computed between Nelson Reading Test vocabulary scores and ITBS vocabulary scores and Nelson Reading Test paragraph Comprehension scores and ITBS reading subtest scores. The correlation on the sixth grade level was .73 for the vocabulary and .76 for the paragraph.

The standard error of measurement on an individual score was 2.4 for Form A and 4.1 for Form B.

H. A. Robinson believes the Nelson Reading Test to be an effective measure of reading achievement and reliable when compared with other reading tests. One of its limitations lies in the fact that grade equivalents were not given above 10.5. The most difficult passages in the paragraph comprehension section of the test appeared to be rather easy for mature readers.⁵

Method of Gathering Data

The two schools participating in this study were selected because of similarities in size, location and socio-economic background.

⁵H. Alan Robinson, "Reading," The Sixth Mental Measurement Yearbook (New Jersey: The Gryphon Press, 1965), pp. 1082.

Having selected the schools, the writer studied the cumulative records of sixth grade students in the nongraded school to determine the number of students who had been in attendance at this school for six consecutive years. No attempt was made to obtain an equal number of boys and girls nor to match abilities. The cumulative records revealed that nine boys and eleven girls met the specification of required number of years in attendance. It was believed that twenty would present a large enough sample to apply the test for significance of mean scores.

In studying the cumulative records of the sixth graders in the graded school it was revealed that the number of students in consecutive attendance was greater than twenty. From the records of those who met this specification the writer randomly selected twenty students to make up the graded sampling. No attempt was made to match this sampling in sex or ability with the previously chosen sampling from the nongraded school. Nine boys and eleven girls made up the graded random sampling.

The oral reading ability of the sampling was tested individually by the writer in the fall of 1967 and again in the spring of 1968 using the Gray Oral Reading tests. The administration of this test was conducted within the same week for each school, both for the fall and spring testing.

A quiet place, free from distractions, and where others could not hear the individual child was selected for the testing. A chair was provided for the child across from the examiner. In order to overcome any undue tension or concern on the part of the child being tested, the

writer devoted a few minutes before testing to establish rapport. The following passage was read to each child before he was given the reading passage booklet:

I have some paragraphs which I would like to have you read aloud to me as you would to your teacher and classmates. Read each one clearly and accurately. Remember what you read so that you can answer questions about it when you have finished each passage.

In a moment I will show you the first card. When I say 'get ready to read,' and 'begin', start to read the story to me aloud. If you find a hard word, read it as best you can and continue to read. Do you understand what you are to do?

Here is the first card. Get ready to read. Begin.

A stop watch was used by the examiner to record the time to the nearest second for each passage. Pupils were encouraged to continue reading passages until seven or more errors were made on two successive passages.

The Nelson Reading tests were administered to the sampling of the two schools by the regular reading teacher. Both teachers held a Master's degree and had wide experience in test administration. The Nelson Reading test is a silent reading test with a normal working time of thirty minutes. Each pupil was given a test booklet and an answer sheet. Different forms were used each time the test was administered.

The testing dates for the fall testing were identical and in the same week for the spring testing. The testing procedures outlined in the Manual of Directions were carefully followed by the two teachers. All answer sheets were scored by the writer.

CHAPTER IV

METHOD OF ANALYSIS

Analysis Techniques

This study was designed to compare reading achievement of pupils in graded and nongraded schools. The following section reports results of the statistical analysis utilized in making this comparison. Mean scores, standard deviations and t-tests were used in making this analysis.

It had been previously established that there was no significant difference in the mean intelligence quotient of the two groups, and thus intelligence was held constant when making comparisons of achievement.

The test of the hypothesis--that there is no significant difference in the reading achievement of comparable groups of pupils, one of which is taught in a nongraded school system and the other instructed by traditional methods--lies in the comparison of the performance of two groups of individuals on both oral reading ability and silent reading ability.

Throughout this study t-tests were employed to determine whether significant differences occurred on either the Gray Reading Test or the Nelson Silent Reading Test. The null hypothesis was sustained for all tests on the .05 level of confidence.

Description of Findings

The findings of this study do not agree with the findings of M. K. Skapski, V. Ingram and Richard Hart whose studies showed a significant difference favoring the nongraded pupils nor do they agree with the findings of Carbone and Koontz whose research findings favor the graded pupils.

The means and standard deviations for all tests administered to the sampling groups are presented in Tables VI, VII, and VIII. The largest difference in pretest-posttest results occurred in the mean for the nongraded population on the Gray Oral test (3.5) as opposed to the mean gain of the graded sampling (1.6), as is shown in Table VIII. Both groups performed above national norms. The standard deviation spread was very small on all tests. Perhaps the reason for the post-test gain favoring the nongraded system can be explained by an analysis of the errors made by each group in the Gray tests. Table IX shows that both groups decreased mistakes in word omissions, insertions, substitutions and repetitions. However, both groups increased the number of gross errors made while reading the oral passages on the spring tests. This resulted from a greater effort on the part of all pupils tested to attack unknown words. The greatest difference occurred in the decrease of repetition for both groups with special attention on the nongraded who decrease the number of errors from 149 in the pretest to eight on the posttest. In eliminating repetition the speed with which the passages were read increased considerably. This noticeable reduction of

TABLE VI
 MEAN DIFFERENCES ON THE NELSON READING TEST
 GIVEN IN THE FALL OF 1967

Subtest	Graded*	Nongraded**	$\bar{X}_1 - \bar{X}_2$	t
Word knowledge	8.21	8.35	.14	
Paragraph knowledge	9.13	9.59	.46	
Total	8.57	8.64	.07	.0025

* Graded N-20 S.D. = .77

** Nongraded N-20 S.D. = .78

TABLE VII
 MEAN DIFFERENCES ON THE NELSON READING TEST
 GIVEN IN THE SPRING OF 1968

Subtest	Graded*	Nongraded**	$\bar{X}_1 - \bar{X}_2$	t
Word knowledge	9.635	9.11	.52	
Paragraph knowledge	9.540	9.49	.05	
Total	9.645	9.26	.38	.124

* Graded N = 20 S.D. = 1.07

** Nongraded N = 20 S.D. = 1.82

TABLE VIII
 MEAN DIFFERENCES DERIVED FROM THE GRAY ORAL READING
 TESTS FOR THE TOTAL SAMPLING POPULATION

	Graded*	Nongraded**	$\bar{X}_1 - \bar{X}_2$	t
Fall	9.03	7.48	1.55	.0558
Spring	10.9	10.7	.02	.0017
Graded* S.D. - Fall	2.32	Nongraded** - S.D. - Fall		1.56
Spring	1.67	Spring		1.18

repetitions aided the nongraded since speed was one factor used in determining the individual's scores. The graded population scored higher on the Gray pretesting and made a marked gain in the spring testing. Although the mean for the graded sampling was higher there was no significant t.

On the Nelson pretest given in the fall of 1967 the nongraded scored higher (.07) than the graded in both Word Knowledge and Paragraph Knowledge but this difference was not significant. Table VII shows a steady gain for both groups but the gain favors the graded sampling. The graded population gain was 1.07 in contrast to the nongraded whose posttest gain was .62. This gain was not significant.

In comparing the mean scores for both boys and girls, Table X shows a trend toward the girls instructed under the graded system

TABLE IX
 ERRORS MADE ON THE GRAY ORAL READING TESTS

	Graded		Nongraded	
	Fall	Spring	Fall	Spring
Aid	5	5	4	4
Gross mistakes	95	133	124	140
Partial mistakes	205	105	119	156
Omissions	31	19	41	29
Insertions	47	14	39	27
Substitutions	60	41	84	70
Repetition	80	23	149	8
Inversion	0	0	0	0

TABLE X

COMPARISON OF MEAN SCORES BETWEEN BOYS AND
GIRLS OF THE TWO SAMPLING GROUPS

Tests	N = 9		N = 8		N = 11		N = 12	
	Boys graded	Girls nongraded	Boys nongraded	Girls graded	Boys nongraded	Girls graded	Boys nongraded	Girls nongraded
Nelson	Fall	8.60	8.45	8.54	9.48			
	Spring	9.50	9.12	9.76	9.41			
	Gain	.90	.67	1.22	-.07			
	Fall	9.45	7.23	8.74	7.64			
	Spring	10.90	10.50	10.90	10.80			
	Gain	1.45	3.27	2.16	3.16			

TABLE XI
STUDENT GAIN ON THE GRAY ORAL READING TESTS AND
THE NELSON READING TESTS

Student	Gain on Gray tests	Gain on Nelson vocabulary	Gain on Nelson paragraph	Gain on total	Sex
Graded**					
1	5.9	.9	1.5	1.3	F
2	1.0	.0	1.0	.0	F
3	.0*	1.2	1.1	1.2	F
4	2.3	1.8	1.2	1.6	F
5	.6	1.8	1.8	1.8	F
6	1.1	2.4	.3	1.5	F
7	4.4	2.7	1.1	2.0	F
8	.4	2.4	.0*	.9	F
9	3.1	3.1	.8	2.2	F
10	1.4	1.1	.0*	.0*	F
11	3.8	1.9	1.2	.9	F
12	3.2	1.2	.2	.9	M
13	1.5	.4	2.5	1.5	M
14	1.6	1.2	.0*	.1*	M
15	1.2	1.8	.4	1.2	M
16	.0*	1.5	.0*	.7	M
17	.0*	-.2	-.4	-.2	M
18	1.5	1.9	2.8	2.4	M
19	2.8	.4	-.3	.3	M
20	2.0	2.0	.2	1.2	M

TABLE XI (concluded)

Student	Gain on Gray tests	Gain on Nelson vocabulary	Gain on Nelson paragraph	Gain on total	Sex
Nongraded***					
1	4.8	.0	1.3	2.4	F
2	.9	.1	-.2	-.1	F
3	3.7	-.8	.4	-.2	F
4	2.5	.0	-.1	.0	F
5	3.8	1.2	.0	.3	F
6	3.5	.5	.0	.4	F
7	3.4	1.2	1.5	1.9	F
8	3.4	1.9	.1	1.9	F
9	5.1	1.4	1.3	1.2	M
10	3.8	1.4	.0	1.0	F
11	2.8	-.2	.7	.2	M
12	3.6	.5	.6	1.4	F
13	3.8	1.8	1.9	2.3	M
14	3.5	1.6	.1	1.0	M
15	2.5	.9	-.9	-.3	M
16	3.5	.0	.0	.0	F
17	3.4	2.1	-.6	1.6	M
18	3.7	-.2	.2	.8	M
19	2.0	.6	.0	.0	M
20	1.3	1.1	.0	1.0	F

* Student obtained maximum score on pretest and posttest.

** Graded gain

mean 1.69

1.44

.79

1.08

M = 9

F = 11

*** Nongraded

gain mean 2.25

.755

.375

.84

M = 8

F = 12

whose gain on both the silent and oral tests is greater. The greatest increase occurred on the nongraded boys' total gain (3.27).

In comparing the individual student gain of the sampling populations the nongraded students showed a more steady gain on all tests. However, Table XI shows the nongraded samplings' mean gain to be higher than the graded sampling for the oral tests but lower on the Nelson tests. As shown in Table XI a number of the graded sampling obtained the highest possible score on both the Gray Oral Reading and the Nelson pretests repeating this performance on the posttests. The mean gain of these students was reported as zero.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary of Hypothesis, Method, and Findings

The purpose of this study was to compare reading achievement of pupils in graded and nongraded schools. Time limited the study--restricting it to a comparison of only two school systems.

The initial chapters of this study reviewed much of the background and current literature relative to the organization of elementary schools. The dearth of experimental evidence attesting to the effectiveness of various organizational structures led to the development of this study.

The criterion used in selecting the student sampling was consecutive attendance at either school for a period of six years. No attempt was made to match participants on the basis of intelligence, age, or sex.

The two schools participating in this study were selected because of similarities in size, location, and socio-economic background. Both schools were located near prominent universities which provided numerous educational opportunities for the citizens of either city. A study of the educational background of the parents of students involved in the experiment showed that parents of both groups had similar educational experience.

In order to assess the general reading ability of students participating in the study both silent reading ability as well as oral ability were tested. Individual oral reading tests were administered to each student participating in the study in the fall of 1967 and again in the spring of 1968. Silent reading tests were administered by the regular reading teachers in either school.

Conclusions and Recommendations

Basically, this study was an attempt to compare reading achievement of students instructed under the nongraded plan with those of students under the graded plan. Statistical analysis showed no significant difference between the two methods of instruction. This evidence contradicted the notion that a change in school organizational structure, such as nongrading, in itself will produce higher academic achievement.

The writer feels justified in placing considerable confidence in the findings of this study. Care was taken to control size, geographic location, and socio-economic factors in the two schools being compared. This study, however, was limited in time and restricted to a comparison of only two school systems. Therefore, some suggestions for further research and study include:

- 1) Development of a similar study, using a larger population sampling.
- 2) Match students on the basis of intelligence using the same intelligence tests.
- 3) Employ psychological testing to determine if nongrading releases more tension than does a graded plan.

- 4) Employ reading tests which will test the frustration point of the sampling.

The writer does not know whether nongrading is the answer to meeting the challenges of a rapidly changing era. It is obvious, through a study of the evolution of the American school system, that educators have in the past met the challenges with new programs and new practices to effect fundamental improvement in the schools.

Perhaps the most challenging and frustrating task of teachers has been the attempt to achieve the optimum development of each person's capacities. It is possible that the often heard admonition to recognize individual differences has had a common meaning for teachers regardless of the organizational structure of the schools in which they teach.

Helpful solutions have often resulted from the field of educational research where the questions have been asked and studies set up to help find answers. Not all studies have given the expected answers nor have all studies given the expected conclusions, but many have pointed out a need for more experimentation.

Educational literature has indicated an attempt on the part of many teachers to seek better ways of developing all phases of growth with an emphasis on maintaining good mental health. A variety of plans have been used, including the changing of curriculum requirements, changing the methods of instruction and the changing of school and classroom organization. In the forefront of these endeavors have been a variety of nongraded plans of organization. Research has indicated that nongrading calls for a change in thinking and where this kind of change is involved

time is needed. Perhaps today more than ever, educators are realizing that in education as in everything else, we cannot do today's job with yesterday's tools and be in business tomorrow.

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THE RELATIVE MERITS OF TEACHING CHILDREN READING IN
A NONGRADED VERSUS A GRADED SCHOOL SYSTEM

by

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AN ABSTRACT OF A MASTER'S THESIS

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Today, the adequacy of the well-established graded school system has been questioned by educators as perhaps not the most effective means of meeting the educational needs of today's youth. A perusal of educational journals demonstrates a need for a drastic change in the organizational structure of the American school system. Many different plans have been introduced, but the fastest innovation is nongrading. Because many positive claims for nongrading have been made without much evidence of a preplanned design based on statistical analysis it was the purpose of this study to seek additional evidence concerning the effect of nongrading on the reading achievement of pupils as opposed to the effect of traditional teaching.

Two schools, one traditionally oriented with the other with a nongraded curriculum were chosen for this study because of similarities in location, size, and socio-economic backgrounds. Twenty students from among those attending each school for a period of six consecutive years were chosen as the sampling population.

Students participating in the study were pretested in the fall of 1967 and again in the spring of 1968. The Gray Oral Reading tests were administered individually by the writer and the Nelson Silent Reading Tests were administered by the regular reading teachers. Statistical analysis showed that there was no significant difference on the mean scores for either group. However, both groups performed considerably higher than the national norm. The standard deviation spread was relatively small on all tests.

Because this study was limited in time and restricted to a comparison of but two school systems, some suggestions for further research and study include:

- 1) Development of a similar study using a larger population sampling.
- 2) Match students on the basis of intelligence using the same intelligence tests.
- 3) Employ psychological testing to determine if nongrading releases more tension than does a graded plan.

Is nongrading the answer to meeting challenges of a rapidly changing era? Educators are not certain but it is obvious that the American school system has in the past met challenges with new programs and new practices to effect fundamental improvement in the schools. Perhaps today more than ever, educators are realizing that in education as in everything else, we cannot do today's job with yesterday's tools and be in business tomorrow.