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To the Graduate Council:

I am submitting herewith a thesis written by E. Stanley Chace entitled, "An Analysis of Some Effects of Multiple-Grade Grouping in an Elementary School." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Curriculum and Instruction.

A. M. Johnston
Major Professor

We have read this thesis and
recommend its acceptance:

Alberta Lowe

John W. Gilliland

Lavis E. Hawk

Gra. N. Chiles

Accepted for the Council:

H. E. Spivey
Dean of the Graduate School

AN ANALYSIS OF SOME EFFECTS OF MULTIPLE-GRADE GROUPING
IN AN ELEMENTARY SCHOOL

A Dissertation
Presented to
the Graduate Council of
The University of Tennessee

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
E. Stanley Chace
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This study is dedicated to the many girls and boys who have made the study possible, and to the many other girls and boys whom the study was designed to benefit.

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CHAPTER I

INTRODUCTION

I. THE PURPOSE OF THE STUDY

The purpose of this study is to evaluate a type of elementary school organization in which students were grouped into multiple-grade units. For the purpose of this study, multiple-grade units were those classrooms in which from two to four different grades were represented and were taught by one teacher. The evaluation was accomplished through a comparative analysis of the academic, personality, and social development of students selected from the multiple-grade units and students selected from the traditional graded classroom. Subjective evidence was also included in the evaluation to determine the attitudes of teachers, administrators, and parents toward the multiple-grade type of organization. Concomitant with this evaluation was an attempt to:

1. Determine the source of the assumptions underlying current practices of grading organization.
2. Identify advantages of the "one-room school" organization within the modern elementary school.
3. Identify the difficulties inherent in and attending multiple-grade organization.

II. THE IMPORTANCE OF THE STUDY

The discussions and opinions relating to groups and grouping are ubiquitous. While it may appear that more heat than light is generated in such discussions, the inexorable conclusion that grouping must be practiced is impressed upon the observer.

It can be argued that it would be impossible to organize a school without some method of grouping. If by grouping is meant the division of the total student body into smaller units for the teaching-learning process, the argument would be subject to wide acceptance. If, on the other hand, the term is used to denote a unique similarity or combination of similarities as age, intelligence quotients, social maturity, or sex, immediate challenge would be forthcoming.

Some type of grouping appears, at the present, to be mandatory. What is to be scrutinized is the assumption that an across-the-board technique--school wide grouping on the basis of one or more factors--provides the most efficient organization for the teaching-learning process.

It would appear easier to understand the assumptions behind a practice if one is acquainted with the evolution of that practice. Many of those things which are assumed to be natural are revealed to be nothing more than persistent traditions which have outlived the conditions that brought them about.

Grouping children by grades has become an established practice. Historically, such practice did not always exist. Currently, such practice is being questioned. The proposal that grades be abandoned,

however, runs so contrary to many cherished assumptions that it will remain experimental for some time.

The suggestion that children of several grades may be grouped together probably arouses an unpleasant connotation in the modern mind. Multiple-grading is considered synonymous with the "one room schoolhouse," and this vestige of the past is considered synonymous with inferior education. A re-evaluation of these assumptions is one of the purposes of this study.

There is some agreement that the last word in grouping within the elementary school has not been found. A number of methods have been proposed and stoutly defended by their proponents. In most of these plans, arguments can be advanced to indicate their value. This value, in some instances, appears to be limited to only one of the several factors which must be considered in a good teaching-learning environment.

Today's educators are being challenged to re-examine their practices and the assumptions which underlie those practices. Such writers as Goodlad and Anderson in their book, The Nongraded Elementary School,¹ are challenging school personnel with dramatic departures from the traditional. Administrators are confronted with the task of remaining both progressive but not radical, and conservative but not complacent. They must not discard the sound for the untested, nor ignore the tested for the obsolete.

¹John I. Goodlad and Robert A. Anderson, The Nongraded Elementary School (New York: Harcourt, Brace and Co., 1959).

The characteristics of good grouping as opposed to poor grouping would be applicable to any of the varied plans suggested. It is equally applicable to multiple-grade grouping. The assumption is made, however, that these characteristics are more adequately manifested in a multiple-grade classroom than in a single-grade classroom. These characteristics include: a group where commonness of interest, concern, and purpose exist; a group in which each member has a feeling of belonging, and is valued and appreciated; a group in which each individual will receive the optimum stimulation; a group that facilitates individualization of instruction; a group that permits each child the fullest opportunity for growth and development, unhampered by artificial boundaries; a group that provides for the individual differences of its members; a group that contains many talents and abilities permitting varied contributions for the good of the whole group; and, a group that is a model of democracy.

This study was designed to explore the multiple-grade concept of organization. This study is important because:

1. It explores an area that has been largely neglected in the search for better methods of organization.
 - a. Only two previous studies have been discovered that pertain to this method of grouping.²
2. The limited amount of research data available supports contradictory conclusions.

²Arthur W. Foshay, "Interage Grouping in the Elementary School" (unpublished Doctor's thesis, Teachers College, Columbia University, New York, 1948); Walter Rehwoldt, "Aspects of Multigrade Teaching in the Elementary School" (unpublished Doctor's thesis, University of Southern California, Los Angeles, 1957).

- a. Foshay's study questions the deliberate formation of multiple-grade units.³
 - b. Rehwoldt's study points out significant gains made by students in multiple-grade units.⁴
3. The best methods of organizing the teaching-learning process may yet be discovered.
- a. The nineteenth and early twentieth century attempts to break the lock step of graded school organization sought to modify the arbitrariness of grade standards rather than to eliminate grades.⁵
 - b. More recently, since the plan was first introduced at Wester Springs, Illinois, in 1934, attempts have been made to eliminate the graded structure.⁶
4. Rural schools, with from one to six teachers and hence more than one grade per teacher, will remain a part of the American educational structure for some time to come.
- a. Though the number of rural schools has diminished, as recently as 1954 there were 105,534 such schools, 40,000 of which were one-teacher schools.⁷

³Foshay, loc. cit.

⁴Rehwoldt, loc. cit.

⁵Chester W. Harris (ed.). Encyclopedia of Educational Research, 3rd ed. (New York: The Macmillan Company, 1960), p. 224.

⁶Florence C. Kelley, "The Primary School in Milwaukee," Childhood Education, 24:236-38, March 1948.

⁷Harris, op. cit., p. 1167.

- b. The fact that rural schools do and probably will continue to exist has produced some literature which gives attention to group plans of instructional organization.⁸
- 5. It is possible that some "discarded ideas" were discarded for invalid reasons.
 - a. Butterworth and Dawson point out that a good teaching-learning environment can be achieved in a multiple-grade organization.⁹
 - b. The Appleton, Wisconsin experiment with the nongraded organization indicates that good learning can be accomplished without the rigidity of the traditional grade structure.¹⁰
- 6. One of the most recent experiments with multiple-grading, in Minneapolis, Minnesota was discontinued due to the difficulties encountered.
 - a. Arthur J. Lewis, Assistant Superintendent for Elementary Education, stated that their ". . . situation made it impossible to continue it. We did not have an opportunity for any formal evaluation, but an informal reaction I received would indicate that it was not too

⁸Julian E. Butterworth and Howard A. Dawson, The Modern Rural School (New York: McGraw-Hill Book Company, Inc.) 1952.

⁹Ibid.

¹⁰Appleton Public Schools, History and Development of our Continuous Progress Plan, A Report Prepared by the Appleton Schools (Wisconsin: Appleton Public Schools, 1957).

satisfactory."¹¹

7. There is a nostalgic feeling, possessed by some that the rural school organization had some qualities which have not been duplicated in more recent organizational ventures.

III. DEFINITIONS OF TERMS USED

Unless otherwise stated at the point of usage, the following terms shall be employed with the definitions as given by Good.¹²

Grade Group

The pupils enrolled in or belong to one of the grades in an elementary school.

Ungraded Group

A class so organized along lines of individualized instruction as to permit each pupil to work at his own rate.

Multiple-grade Group

A class in which pupils from two or more grades are grouped, and in which some grade distinction is made in content and experiences.

Multi-grade Group

See Multiple-grade Group.

¹¹Quoted from personal letter dated April 20, 1960.

¹²Carter V. Good, Dictionary of Education (New York: McGraw-Hill Book Company, Inc., 1945).

Inter-age Group

A selection of children from a variety of grade levels and grouped in a teaching-learning environment that is structured around common social experiences.

Homogeneous Group

A collection of individuals having a much higher degree of similarity in respect to a given trait than is found in a random sampling.

Heterogeneous Group

A random sampling of students in which a similarity of a given trait within the group will occur at no greater than a chance frequency.

IV. RELATED STUDIES

The amount of research data available that is of significance to this study is extremely limited. An extensive survey of related literature revealed only two studies that have been conducted within the past thirteen years, and one abortive attempt that produced little data. The two studies referred to were conducted nearly a decade apart in time, a continent apart in locality, and have resulted in conclusions almost as widely divergent. These two studies are:

Horace Mann-Lincoln School, Columbia University, New York City

The study conducted at Columbia University by Arthur Foshay¹³ in 1948, resulted more from accident than from preplanning. An unexpected

¹³Foshay, loc. cit.

increase in enrollment created an administrative problem much akin to that of many schools. In an attempt to keep the class size at a level consistent with sound teaching-learning theories, it was suggested that the overflow from grades four, five, and six be organized as another group. At the time, this plan was somewhat unpopular. Parents were somewhat apprehensive of the quality of education their children would receive. The staff member, who somewhat reluctantly accepted the assignment, was apprehensive of the difficulties. The administration was apprehensive of the parents and students; but, the students seemed to have no apprehensions.

Very quickly the teacher had to devise new teaching techniques. In this task she received extensive cooperation from other teachers and college faculty. In a very short time a keen interest had been developed by other staff members. From time to time these staff members would visit the classroom to observe the development and progress of "their experiment."

The decision was then made to run a controlled study with this group. Members of the staff had come to recognize that an ideal situation had been created for the measurement of the effects of this type of grouping.

The school itself was unlike many public schools. One example of this may be seen in the fact that the mean I. Q. of the experimental (interage or multiple-graded) group was 123 and the mean I. Q. of the control (graded) group was 129.¹⁴ Another example can be illustrated by the variety of resource personnel constantly available to this class.

¹⁴Foshay, op. cit., p. 68.

The procedures used by the group conducting this study included the testing of both groups near the beginning of the school year and again at the close. The amount of growth or change in the areas tested were then subjected to a statistical analysis. Those areas tested or measured by standardized instruments or observation included academic achievement, choice of friends, conceptions of age, verbal behavior, and use of time.

The conclusions of this study may not be considered too significant for other schools. It does, nevertheless, point up some interesting facts. The control (graded) groups made significantly greater gains in reading, arithmetic, spelling, and language usage than did the experimental (multiple-graded) group. The mean gain of the experimental group was approximately one-half year as measured by the achievement tests.¹⁵

There was no significant difference in the results of the various groups in the areas of choice of friends and verbal behavior. The only significant difference in social characteristics of the experimental group was in conceptions of age. The data indicated that children in the experimental group viewed a number of social traits as being independent of age. The implications of this data were that children in interage or multiple-grade groups show a greater tendency than others to take other children as they are, rather than to consider their age first and set their social expectations accordingly.

¹⁵Ibid., p. 184.

The findings of this study would seem to indicate that the deliberate formation of interage or multiple-grade groups is a questionable practice. Whether those matters in which the experimental group did better are of importance depends upon one's educational goals. The researchers, at the time this study was completed, felt that any social advantages which the experimental group had could be duplicated in any graded group by utilizing interage grouping for certain purposes.¹⁶

Torrance Unified School District, Torrance, California

The Torrance program was begun in 1955 as a deliberate attempt to explore the characteristics of interage or multiple-grade organization. It has gained wide attention during the last few years through the literary persistence of several participants.

In 1957, Rehwoldt reported the results in a doctoral dissertation¹⁷ at the University of Southern California. The purpose of Rehwoldt's study was similar to that of the above described study at Columbia. The California study, however, was somewhat more comprehensive than was that conducted at Columbia by Foshay. It was designed to analyze the effects of multiple-grade grouping in the areas of scholastic achievement, personal adjustment, social adjustment, social maturity, behavioral characteristics, and attitudes toward school and peers.

One elementary school from the unified district was selected as the experimental unit. All members of the staff participated in the

¹⁶Ibid., p. 237.

¹⁷Rehwoldt, loc. cit.

program though none of them were given any training in multiple-grade teaching. Seven classes of thirty-three each were organized. Eleven students from each of the first three grades comprised one of the primary units; and, the same number of students from each of the intermediate grades comprised the intermediate unit.

Public relations throughout this program were effective. Only one parent meeting was required to establish a waiting list of those who wanted their children in a multiple-grade. Parent dissatisfaction with the results of the program were reported to have been at a minimum, and some indication of the public's acceptance of this program is the fact that, currently, the district has several schools organized into multiple-grade units.

Rehwoldt's conclusions about multiple-grade grouping, drawn from his study, are in conflict with those conclusions reached by Foshay. While this may be explained, it serves to point up the fact that neither study provides sufficient or conclusive proof.

The Torrance experimental data indicate that multiple-grade grouping increases the spread and speed of learning. The results in academic achievement, unlike those in the Columbia experiment, reveal that the experimental group exceeded the control group in reading, arithmetic, and language.¹⁸ Though the difference in reading achievement was not significant, the experimental group achieved a higher mean score.¹⁹

¹⁸J. H. Hull, "Three-Year Study Shows Value of Multigrade Teaching," The Nation's Schools, LXII (July, 1958), p. 36.

¹⁹Ibid.

In the areas of personality development, social adjustment, social maturity, and behavioral characteristics, the experimental group exceeded the scores of the control group.²⁰ Subjective reports and observations indicate that the experimental group developed a better attitude toward their school and toward their peers than had the single-grade pupils.²¹

An unanticipated result, which was observable, was "a remarkable improvement in the quality of instruction and even in the creative personality of the teacher."²²

An implication for this present research from both the Torrance and Columbia studies is that further research is necessary. The fact that both studies indicate that social gains were made suggest an area that also needs further exploration. The disparity in the results of academic achievement that these two studies reveal point up a significant factor that requires additional testing.

The case for interage or multiple-grade grouping has been neither made nor destroyed by these studies; rather, they have but begun the turning of significant ground in the field of educational administration.

V. DEVELOPING A HYPOTHESIS

The interest in multiple-grade grouping that prompted this research project is not something that has grown out of the profession's

²⁰Ibid.

²¹Ibid., p. 37.

²²Ibid.

current concern for more effective methods of grouping. This interest is of long standing, conceived in a time when stories centering about the "little red schoolhouse" were common fare.

Experience as a student in a two-teacher school, from which over 80 per cent of the students have achieved positions in the various professions added to several years as a rural-school board member, has served to heighten that interest. Compounding this was seven years teaching experience with multiple-grade units.

Throughout this period various convictions were developed relative to multiple-grade grouping. Most of these convictions were developed intuitively and lacked authoritative support. A source of concern was the many negative convictions held by others, which appeared to have no greater authoritative support. Due to the nature of these convictions, it was desired that a study be undertaken to reinforce or refute those assumptions which had evolved in a relatively haphazard manner. Some of those assumptions were:

1. Multiple-grading is not, in itself, poor.
2. Multiple-grading has advantages if good teaching is provided.
3. Multiple-grading has advantages if good facilities are provided.
4. Multiple-grading offers social experiences not duplicated in the standard graded structure.
5. Multiple-grading provides richer learning experiences than the traditional graded program.
6. Multiple-grading does not create additional problems in administration.

7. Some people are illogically prejudiced against multiple-grading.
8. Children do not object to multiple-grading.
9. Teaching is not inherently more difficult in multiple-grading.
10. Some of the better techniques of teaching are practiced more regularly in a multiple-grade room.
11. Children need not receive an inferior education because of multiple-grading.
12. Due to the large number of rural schools still in existence, teachers need to learn techniques of teaching in a multiple-grade unit.
13. Different techniques are needed to teach successfully in a multiple-grade school.
14. The multiple-grade organization more closely parallels the structure of society, thus giving the student a more realistic environment in which to develop socially.

No attempt has been made to list these in any significant order.

A perusal will reveal that they may be classified into four areas: administration, academic achievement, social development, and public opinion. As this study was organized, more attention was focused on the areas of academic and social development, and only incidentally upon the other two areas. These assumptions have been restated as the hypotheses which this study attempts to test.

VI. HYPOTHESES

The hypotheses to be tested by this study are:

1. In a multiple-grade classroom, students can make as much academic growth as students in a regularly graded classroom.
2. Rather than suffer, the personality development of students in a multiple-grade classroom will be enhanced.
3. Through daily contact and experiences with children of a wider range of ages, the social development of children in a multiple-grade classroom will be greater than that of children in a graded classroom.
4. Children will develop better attitudes toward school as a result of a multiple-grade experience.
5. Parents acquainted with the multiple-grade program recognize the advantages such a program offers.
6. Teachers experienced in multiple-grade teaching prefer this type of classroom organization due to the greater flexibility in meeting individual needs that such organization affords.
7. School administrators experienced in multiple-grade organization find no greater administrative problems than those encountered in a traditionally graded school.

VII. PROCEDURES

The development of this study included the following procedures:

1. A study of similar and related studies and the available literature pertaining to multiple-grade grouping.

2. Correspondence with personnel in systems that have attempted or are conducting multiple-grade grouping.
3. The development of adequate evaluative criteria.
4. Selection of appropriate testing instruments to secure the desired data.
5. Organization of the experimental group into three units: one with students from grades three and four; one with students from grades five and six; and, one with students from grades three, four, five, and six.
6. Designation of an adequate area from which to secure a random sample control group.
7. Development of the criteria regarding the schools, teachers, ages, sex, and intelligence of students to be used in matching the study groups.
8. Selection of the students from the graded schools.
9. Administration of the Lorge-Thorndike Intelligence Tests, the California Test of Personality, and the Stanford Achievement Tests.
10. Administration of the questionnaires for parents, teachers, and administrators.
11. A statistical analysis of the data derived from the California Test of Personality and the Stanford Achievement Tests using T-scores at the 5 per cent level of significance.
12. Drawing conclusions relative to the outcomes of this study.
13. Considering implications of the conclusions and making recommendations that this study suggests relative to additional research needed.

VIII. LIMITATIONS

While every effort has been made to minimize its effect, bias is not completely absent from this study. Efforts were made to utilize standardized tests for securing data. This was possible in only three areas of concern. Subjective data has been included in the study and the reader should be aware of the bias that this may possibly contain. Much of this subjective data has been secured from personnel who are thoroughly acquainted with the multiple-grade program.

As far as possible, persons not involved in a multiple-grade program were relied upon to administer the various tests. Whereas the random sampling of the graded group of students involved nearly eighty schools, it was impossible to have the same person supervise the administration of all tests. In these schools, each classroom teacher administered the necessary tests to the student or students from her room who were participants in the study.

Due to the differences in the school-year schedules of the school from which the multiple-grade groups were selected and the nearly eighty schools from which the graded groups were selected, it was not possible to secure data of a before-and-after type. While such data are desirable, it was possible, under the circumstances, to secure test data only at the close of the school year. This data was subjected to a statistical analysis.

Another limitation which needs to be considered, both in this study and in those reported in the preceding pages, is the fact that more significant data can be secured from a long term study. It was not

possible, within the scope of this study, to include data from more than one testing.

There are actually many schools in which a multiple-grade program is in operation. This study is limited in that it does not analyze the multiple-program, per se; but rather, it considers the multiple-grade program within one school. The extent to which the many variables of a particular school affects a given program will limit the significance of the results of this study for other schools.

In spite of the limitations which have been identified, the study does serve to add additional data toward the solution of a perplexing problem and does identify additional aspects of the problem which need further consideration.

IX. ORGANIZATION OF THE DISSERTATION

Chapter I has been designed to identify the problem relating to multiple-grade grouping and the hypotheses that this study has attempted to test.

Chapter II is designed to determine the origin of the various assumptions about grading, and to raise questions concerning the validity of those assumptions.

Chapter III will describe the criteria and the procedures used in the selection of test instruments and the graded group. The criteria used in matching the multiple-grade group with the graded group will also be discussed. The selection and testing of the groups will be explained.

Chapter IV will begin the analysis of the test data collected, and will be limited to that data relevant to academic achievement.

Chapter V will contain an analysis of the test data relevant to personality and social development.

Chapter VI is designed to explore the attitudes of parents who have children in multiple-grade classes.

Chapter VII presents the attitudes and opinions of teachers and administrators toward multiple-grade grouping.

Chapter VIII will list the conclusions that are drawn from the data and their analyses, and will present a discussion of the implications of this study and recommendations for additional research.

CHAPTER II

REVIEW AND SYNTHESIS OF LITERATURE

I. INTRODUCTION

The first chapter of this study has sought to establish the fact that multiple-grade grouping does exist, and exists to the extent where it is deemed feasible to analyze its significance. This chapter seeks to point out why multiple-grade grouping or any of the other plans differing from the traditional graded structure warrant consideration. The primary purpose of this chapter, while presenting a historical overview of the concept of grading, is to cause one to challenge the validity of such practice in grouping children.

II. ASSUMPTIONS AND PRACTICES

Since man is, to a large extent, the creature of the culture-pattern into which he is born, it appears only natural that he should overlook the extent to which his ways of thinking and behaving are determined for him. As the evidence of the anthropologist and the sociologist indicates, the institutions, customs, and sanctions of any society provide a framework of reference within which the individual's attitude to life is largely shaped. Such would seem to be the case regarding attitudes toward and assumptions underlying the traditional grade grouping.

III. GRADED GROUPING IN HISTORICAL PERSPECTIVE

The force of culture is one of the most conservative and persistent of all forces. Some writers¹ consider it to be the most effective deterrent to new ideas and progress. Though others may challenge this opinion, the present is a product of the past. Each society adorns the minds of its children after the traditional pattern, and in keeping with real or supposed needs.

At the beginning of the nineteenth century, the whole weight of the philosophic tradition lay behind a system of school organization which was logical, in the formal sense. A school system that separated knowledge into its elements, studied them in the order of their logical complexity, and postponed synthesis until the students were adults, was completely consistent with a culture that held up as ideal the man who was in perfectly logical self-accord. A school with a graded system--a system of levels of difficulty--was in complete agreement with a society that had recently awakened to the powers of the Mind, a faculty to be exercised and cultivated through mental discipline.

The philosophical structure of society was conducive to the development of the graded school.² A society with many at the bottom and a few at the top found its educational analogy in a school organization that admitted many and graduated few, that put hurdles at each grade level, keeping back the less able and promoting the worthy.

¹C. Wissler, Man and Culture (New York: The Thomas Crowell Co., 1923), pp. 183-184; J. Mulhern, A History of Education (New York: The Ronald Press Company, 1959), p. 7ff.

²R. M. MacIver, The Web of Government (New York: Macmillan, 1947), Chapter 5.

A graded school was consistent, too, with the idea of progress toward the "American ideal."³ The class system of Europe had been largely transplanted to the new colonies. To many the possibility of attaining the heights of education appeared to be the only way of realizing the American dream that all men are created equal.

A school that had students moving through grades of imperfection toward an ideal state of complete knowledge was consistent with a value system that had mankind climbing the ladder of imperfection to an ideal of complete comprehension of the universe.⁴ Such an organization succeeded at bringing into itself a system of values that made those in the lower grades less worthy than those in the upper grades--a system that stratified children within grades according to their mental ability, and attached moral significance to the stratification. As a student mastered more difficult material, he was described as having progressed, having passed, having been promoted; he was in a higher grade, the upper school. If he was so unfortunate as to have been unable to master the new material, he was described as having failed, having been demoted; he was lazy, a dunce, a dullard, a sluggard.⁵ It is significant that these are essentially terms of value, but that they are necessary for a description of the graded system.

³R. F. Butts and L. A. Cremin, A History of Education in American Culture (New York: Henry Holt and Company, 1953), p. 29ff.

⁴M. Curti, Growth of American Thought (New York: Harper Brothers, 1943), p. 103.

⁵A classic description of this is found in Thomas Hughes, Tom Brown's School Days (New York: E. P. Dutton and Company, 1919).

Cubberley presented a comprehensive description of the evolution of the graded system within the United States.⁶ The influence of the Prussian organizational system through the efforts of such individuals as Neef, Griscom, Woodbridge, Cousin, Stowe, Mann, and Barnard, among others, can be easily detected. The actual implementation of "forms" or grades began in the Latin schools of New England. The word "form" applied to a long bench on which a specific group or class of boys would sit. The word soon became applied to a class or grade in school.⁷

During the nineteenth century, the schools experienced the transition in organization from years, through forms, to grades. In the immediate post-Revolutionary period, children were taught individually, for the most part. The monitorial system exposed the apparent wastefulness of individual tutoring and focused attention upon certain merits of large group instruction and upon the resultant economies of operation.⁸ Between 1800 and 1850, when the common school became a reality, the rapid increase in the size of schools compelled the teachers to develop some basis for distributing the children. A number of plans were attempted, but by the end of the Civil War distribution by grades was in general use.⁹

Another factor in operation throughout the eighteenth and nineteenth centuries that fostered the establishment of grades was the appearance of

⁶E. P. Cubberley, Public Education in the United States (New York: Houghton Mifflin Company, 1934), pp. 300-315.

⁷Butts and Cremin, op. cit., p. 213.

⁸Lancaster stated the annual pupil cost at \$1.06 in his school, and Bell placed the cost at an even dollar. See Adolphe E. Meyer, An Educational History of the American People (New York: McGraw-Hill, 1957), p. 128.

⁹Butts and Cremin, op. cit., p. 275.

spelling, reading, grammar and geography textbooks. Colburn's arithmetic books were introduced in 1821. Fifteen years later, The McGuffey Eclectic Readers, graded through six levels, began their fifty-year domination.¹⁰ Soon, innumerable textbooks poured in upon the schoolmaster. The impact that these books had upon the entrenchment of the grade system is pointed out by Goodlad:

The work considered appropriate for a given grade level determined the content of the textbooks, and the content of the textbooks came to be regarded as appropriate for the grade.¹¹

By the turn of the present century, the graded system had become universal in the public schools. Shearer observed that "the pendulum had swung from no system to nothing but system."¹² Elementary schools extended from grade one through eight, and high schools from grade nine through grades eleven or twelve. The division of schools into grades appeared to be the normal school organization, and half a century or more of acceptance in the United States had given it respectability. Each school had its specific program composed of selected bodies of knowledge and designated skills to be developed. These programs were to be mastered grade by grade; any student failing to do so was not advanced through the grades. Not too infrequently, students were retarded as much as three years in a grade.

¹⁰See Alice McGuffey Ruggles, The Story of the McGuffeys (New York: American Book Company, 1950).

¹¹Goodlad and Anderson, op. cit., p. 47.

¹²William J. Shearer, The Grading of Schools (New York: H. P. Smith Publishing Company, 1899), p. 21.

Throughout this period of development, certain attitudes continued to be associated with grade grouping. "Grade" came to be associated with "grade standards"; students were promoted or advanced from grade to grade. A philosophic tradition had created the matrix from which prevailing attitudes issued.

IV. GRADED GROUPING IN A CHANGING PERSPECTIVE

The historical period between the Civil War and World War II was marked by significant changes and developments in philosophical, psychological, and social points of view. According to Reisner,¹³ every movement for school reform during this period was aimed at the mechanical system fostered by the graded school. The impact, which these new concepts had upon graded grouping, however, was one of modification rather than basic change.

Some educators became vocal in their questioning of graded schools. The cluster of years about the turn of the century was marked by a number of experimental plans to break down established patterns of organization in elementary schools.¹⁴ In practice, however, none revealed any serious intention of restructuring the graded framework; rather, most were concerned primarily with improved methods of subject matter learning by

¹³E. H. Reisner, The Evolution of the Common School (New York: MacMillan, 1930), p. 428.

¹⁴For a description of several of these plans see: George C. Kyte, The Principal at Work (New York: Ginn and Company, 1941), pp. 147-153; Willard S. Ellsbree and Harold J. McNally, Elementary School Administration and Supervision (New York: American Book Company, 1955), pp. 218-228.

individualized projects and with the separation of the more intellectually capable from the less gifted so that ". . . each group could proceed at its own rate."¹⁵ Considerable progress has been made in pupil classification since the time of Boykin's¹⁶ analysis; yet, one is aware that the majority practice has been shaped more by tradition than by research data.

Homogeneous Grouping

One modification of the graded grouping plan came partly as a result of the emphasis on mental testing and partly as a result of the changes in the school population brought about by the prevailing social forces. This plan, known as homogeneous grouping was an attempt to group children according to individual ability. Coxé identified the prevailing assumption when he stated:

Psychologists and practical schoolmen alike are fairly well agreed that the learning characteristics of bright children and of slow children are distinctly different and that their ultimate educational needs are different, if not radically different.¹⁷

Academic Ability Grouping. Of the number of concepts which were developed about homogeneous grouping, the one most compatible with the organizational plan then in effect was homogeneity of academic ability. This plan was given its first major trial during 1920 in Detroit, Michigan. The superior 20 per cent of the students were organized into X groups.

¹⁵Butts and Cremin, op. cit., p. 589.

¹⁶J. C. Boykin, "Class Intervals in City Public Schools," Report of the Commissioner of Education, Vol. 2 (Washington, D. C., 1890-1891), p. 962.

¹⁷Warren W. Coxé, "The Grouping of Pupils," The Grouping of Pupils, Thirty-fifth Yearbook of the National Society for the Study of Education, Part I (Bloomington, Illinois: Public School Publishing Company, 1936), p. 1.

The middle 60 per cent were organized into Y groups. The least able 20 per cent were organized into Z groups.¹⁸

By 1938 the movement had become widespread. Criteria other than mental ability had been added. Turney identified twenty-three criteria, which were being utilized singly or in combinations, for assigning children into ability groups.¹⁹ Turney presented one of the most elaborate justifications of ability grouping that had been attempted. Raup, however, contended that ability grouping was found to be untenable.²⁰ In this same yearbook, Raup was supported by Alberty, Herap, and Reisner.

One of the first major studies that questioned the wisdom of ability grouping was that of Alice Keliher.²¹ She identified most of the arguments that became matters of widespread concern during the ensuing years. One of the most recent analysis of these arguments, with

¹⁸For a detailed description of the Detroit program see: Henry J. Baker, "The Psychology of Ability Groups and Implications for Instructional Differentiation," The Grouping of Pupils, Thirty-fifth Yearbook of the National Society for the Study of Education, Part I (Bloomington, Illinois: Public School Publishing Company, 1936), pp. 155-160.

¹⁹Austin H. Turney, "The Psychological Basis of Grouping," The Grouping of Pupils, Thirty-fifth Yearbook of the National Society for the Study of Education, Part I (Bloomington, Illinois: Public School Publishing Company, 1936), p. 86.

²⁰R. Bruce Raup, "Some Philosophical Aspects of Grouping," The Grouping of Pupils, Thirty-fifth Yearbook of the National Society for the Study of Education, Part I (Bloomington, Illinois: Public School Publishing Company, 1936), pp. 43-56.

²¹Alice Keliher, A Critical Study of Homogeneous Grouping, (Teachers College Contribution No. 452, 1931).

supporting data, was made by Goodlad and Anderson.²²

Burr's study, conducted in 1931, attacked the homogeneity of homogeneous groups.²³ He pointed out that individuals are not themselves homogeneous in physical and mental traits nor in achievement in school subjects. More recently, Olson supported Burr's contention when he stated, "Research on individual differences has dispelled the notion that children are alike."²⁴ Caswell indicated that attempts to maintain homogeneity by non-promotion did not succeed.²⁵ Additional research in this and related areas has demonstrated the futility of achieving any significant degree of homogeneity among members of a group. Such research has supported the fact that children grouped homogeneously on a criterion of general ability or achievement remain heterogeneous in the various subcategories of those factors as well as factors other than ability.

Chronological Age Grouping. The argumentative data against homogeneous grouping by non-promotion had a corollary: grade standards were therefore impossible to maintain. This, coupled with the argument that

²²Goodlad and Anderson, op. cit., Chapter 1.

²³Marvin H. Burr, A Study of Homogeneous Grouping (Teachers College, Columbia University, 1931), pp. 50-56.

²⁴Willard C. Olson, "Implications of the Dynamics of Instructive Groups," Dynamics of Instructional Groups, Fifty-ninth Yearbook of the Society for the Study of Education, Part II (University of Chicago Press, 1960), p. 271.

²⁵Hollis L. Caswell, Non-Promotion in Elementary Schools (Division of Surveys and Field Studies, George Peabody College, Nashville, Tenn., 1933), p. 19.

modern schools have broader purposes than were characteristic of schools in which grade standards were maintained, suggested that some neutral plan be developed. Such a plan was found in age grouping.

Known as the "100 per cent promotion plan" or the "age-grade plan," age grouping has achieved wide acceptance and is considered good practice in many school systems. It is open to the same fundamental criticism that applied to homogeneous grouping--that holding one factor constant does not greatly reduce variations in other factors. Olson points out:

Instruction cannot make all children alike or bring them to the same point at a given age. To understand this fully, one must appreciate that children, even with the same experiences, grow at different rates and have different aptitudes for learning.²⁶

Elsbree²⁷ synthesizes the current arguments against age-grouping though these arguments contradict the support he presented for age-grouping a few years ago.²⁸

Social Maturity Grouping. A growing number of educators were giving increased attention to the social concept of education. Out of this consideration came yet another criteria for seeking homogeneity in grouping. This was pointed out by Caswell when he stated:

²⁶Willard C. Olson, Child Development (Boston: D. C. Heath and Company, 1949), p. 123.

²⁷Elsbree and McNally, op. cit., pp. 253-256.

²⁸Willard S. Elsbree, Pupil Progress in the Elementary School, Practical Suggestions for Teaching, No. 5 (Teachers College, Columbia University, 1943), pp. 32, 33.

The best basic unit of organization yet devised is the self-contained classroom in which a group of children of approximately the same social maturity are grouped under the extended and continuous guidance of a single teacher.²⁹

This concept was expanded by Stratemeyer when she stated:

Study of the concerns of children and youth indicate that learners of approximately the same maturity have similar needs and interests. This suggests bringing together children of about the same maturity regardless of exact chronological age, intelligence, social, religious, or racial background. Maturity, as used here, is best defined as a complex combination of factors for which there is no standard formula except the best judgment of experienced persons.³⁰

Sex Grouping. The thought of grouping by sex was a remote thought during the early years of American educational history. It was not until significant advances had been made in providing an educational experience for both boys and girls that the question of sex differences was considered. When such consideration was given, it was assumed that girls differed in intelligence from boys. Although this assumption was apparently supported by research, there is now found to be no well-defined advantage for either sex. Those differences, which were assumed to exist by educators in the nineteenth century and which appeared to be supported by research, are now accepted as being more the results of test bias. Reviewing research that has been conducted in sex differences, Freeman³¹ points out:

²⁹Hollis L. Caswell, Education in the Elementary School (New York: American Book Company, 1942), p. 240.

³⁰Florence Stratemeyer, Developing a Curriculum for Modern Living (Teachers College, Columbia University, 1947), p. 370.

³¹Harris, op. cit., pp. 1206, 1207.

1. There is no primary sex difference in average intelligence.
2. There is a small difference in sub-categories of intelligence and in school achievement. Boys tend to perform better in the areas of mathematics, nature study, science, history, and literature. Girls tend to perform better in reading, language, spelling, and handwriting.
3. There is significant differences in interests and attitudes.

Though research has indicated sex differences in physical characteristics and gross motor development,³² it has also indicated a wide maturation rate within one sex.³³ Jones and Mussen discovered that early-maturing girls and late-maturing boys seem to have more problems than do late-maturing girls or early-maturing boys.³⁴ While arguments may be presented for grouping by sex, this as a sole criteria appears unwise.

Interest Grouping. While test data and observational records reveal the existence of sex differences in interests, such support is rarely used to justify interest grouping. In fact, most interest grouping in the elementary school is done on a coeducational basis.

Ever since the impact made by John Dewey was first felt, attention has been given to the interests of children. A review of the

³²Ibid., pp. 685, 686.

³³Olson, op. cit., Chapter II.

³⁴Harris, op. cit., p. 686.

existing literature reveals material that is both self-contradictory and confusing. There are writers, supported by research, who claim that interests are so fleeting and unreliable that they merit little attention. Other writers, also with supporting research, claim that interests are stable enough to provide a basis for education. Super, however, points out that interest-achievement correlations have never been highly significant.³⁵ It is important to point out that this correlation refers to group interest-achievement rather than to individual interest-achievement.

Young indicates that the variability of interests among individuals may be so wide that "group interests" can be maintained only for relatively short periods of time.³⁶

While there is no question that children do have interests and that these interests may be capitalized upon, some researchers are questioning the extent to which these interests have been formed by the social milieu. Mead³⁷ has amply supported the fact that boys are brought up in the male tradition of their culture, girls in the female tradition. The education and the experiences, therefore, of the sexes are unavoidably diverse.

³⁵Ibid., p. 731.

³⁶Doris A. Young, "Factors Associated With the Expressed Science Interests of a Selected Group of Intermediate Grade Children," (unpublished Doctor's thesis, Northwestern University, 1956), p. 107.

³⁷Margaret Mead, Sex and Temperament in Three Primitive Societies (New York: William Morrow and Company, 1935); Male and Female (New York: William Morrow and Company, 1949).

From the foregoing descriptions of these plans, one common plea can be noted--a restriction on differences. That restriction may be based on mental age, chronological age, social maturity, sex, interests, or any other of a multitude of factors. The assumption that considerable restriction is necessary, however, goes unchallenged and with it the assumption that graded grouping of some sort is necessary.

V. THE CASE FOR GRADED GROUPING

While graded grouping may be questioned in terms of twentieth-century data and insights, it must be remembered that graded grouping was a part of its time, conceived in the knowledge that was then available. At its inception, graded grouping was the means of expediting the best education visualized at that time. Whether it is adequate for the present century is being questioned.

It must not be forgotten that graded grouping was not out of harmony with the concepts prevailing during its inception. The extent to which those concepts are still valid may be used to justify the continuation of this practice. Whether those concepts are still valid is something which needs to be determined.

VI. NEWER CONCEPTS IN PERSPECTIVE

Twentieth-century philosophical and psychological thought, together with current interest in educational experimentation provides the environment for questioning educational practice. Goodlad identifies four sweeping movements against which any type of organization now

needs to be viewed. These are: (1) Dewey's method of systematic inquiry and reflection, which demanded that educational objectives be viewed in broader perspective; (2) Research in human development which revealed that children differ not only physically, emotionally, and socially, but also intellectually; (3) Research into the psychological effects of many school practices; and (4) Newer concepts in learning theory.³⁸ These factors do not dictate a specific form of school organization; they do, however, force the questioning of prevailing practices and the examination of alternative structures. Multiple-grade grouping is one of these structures.

A consideration of multiple-grade grouping against these criteria makes a plausible argument for the experimental evaluation of this type of organization. This is supported by the following criteria.

Philosophical Criteria. One of the significant changes during the past twenty-five years, in philosophical thought relating to education, is the increased attention given to children as social beings. Today's education is concerned with social learnings and the resultant behavior. If children are to display behavior adequate to a given situation, they need to face that situation with an adequate perception of the problem which constitutes that particular situation. Adequate perception of a problem, in turn, requires a variety of experiences through which this perception is developed.

³⁸Goodlad and Anderson, op. cit., p. 51, 52.

Those who are concerned about inadequate behavior, and seek for educational experiences that are conducive to the development of problem-solving or adequate behavior, do not ask for homogeneity of factors to be present.

Dewey's concept of self-realization identifies this criteria. He states, "To realize capacity. . . means to act at the height of action, to realize its full meaning."³⁹ If one factor of learning is the development of meaning and if, as Dewey postulates, meaning arises through communication,⁴⁰ then the establishment of a social framework for the teaching-learning process appears to provide the maximum environment for development. Mead maintains that knowledge is the recognition of universals.⁴¹ If this knowledge is to be pursued, it would appear to demand a variety of experiences as a condition for the recognitions of those universals.

The philosophers would seem to require, as far as grouping is concerned, that such organization be able to foster a variety of experiences which are necessary to enable the development of generalizations from many particulars. This would imply a greater fluidity and flexibility than is now characteristic of grade grouping.

³⁹John Dewey, "Self-Realization as the Moral Ideal," Philosophic Review, Vol. 2, No. 6, November 1893, p. 653.

⁴⁰John Dewey, Experience and Nature (LaSalle, Illinois: The Open Court Publishing House, 1929), p. 139.

⁴¹George M. Mead, Mind, Self, and Society (The University of Chicago Press, 1934), p. 85.

Developmental Criteria. Psychologists recognize individual differences of kind as well as individual differences in degree. Thus, the homogeneity of homogeneity undergoes further attack. Educators must recognize that children differ not only in their general ability to learn but also in the sub-abilities which comprise this general ability. To further complicate the situation, educators must recognize that differences in these sub-abilities are associated with differences in complexes of experience. These complexes in interaction produce differences in pattern, rather than differences in degree. Add to this the understanding that growth is saltatory rather than uniform, and one comes to the conclusion that a type of organization which demands that individual differences be put on a single scale is in violation of current understandings.

Psychological Criteria. While much of the psychological criteria is to be considered in a discussion of the preceding section, the contributions of social psychology and sociology are of too great a value to be dismissed. Increased attention is being given to the effects of school practices upon personality development and academic achievement.

It has been observed that when competition is desired, a restricted range of differences is necessary for effectiveness. The social purposes of the modern elementary school, however, emphasize the cooperative aspects of society, too. One of the most important lessons of life that a child learns by associating with children quite different from himself is that one must be able to get along in a world peopled by persons who are quick or slow, bright or dull, strong or weak, wise or

stupid, ad infinitum.

Getzels states, "To the extent that the nature of the learning process is affected by the nature of the social interaction, the selection of pupils will have an effect on what is learned."⁴² Much attention has been devoted to the intra-action within the group structure. Group dynamics is one of the newer concepts that have extensive ramifications in the structure of a group.

Some believe that the present concern for the group tends to lessen concern for the individual. Reisman⁴³ and Whyte,⁴⁴ critics of American culture, have given attention to the relationship of the person to the group. Both individuals have expressed concern over the pathological implications of the leveling out of individuals within a group. While these critics are not recommending a return to individualism, they would suggest a reduction in the amount of personal dependency upon the group. Social psychologists and social philosophers are emphasizing the importance of accepting and appreciating differences. This emphasis suggests that individuals need to like one another more than they need to be like one another.

⁴²Jacob W. Getzels and Herbert A. Thelen, "The Classroom Group As A Unique Social System," Dynamics of Instructional Groups, Fifty-ninth Yearbook of the National Society for the Study of Education (University of Chicago Press, 1960), p. 56.

⁴³David Reisman, The Lonely Crowd (New Haven: Yale University, 1950).

⁴⁴William H. Whyte, Jr., The Organization Man (New York: Doubleday and Company, Inc., 1957).

Educational Criteria. The degree of importance assigned to subject-mastery seems to determine the point of view held with regard to grouping. Those educators, however, who are interested in the totality of learning experiences will not be controlled by the limitations that the subject-matter orientation imposes. Contemporary school policy emphasizes the importance of adjusting school programs to particular social and cultural circumstances. The interaction of people and groups in a social milieu is a primary source of the needs of those individuals. If contemporary education is to meet those needs, it appears reasonable to assume that the solutions will be more effective when developed in that milieu.

The twentieth century is replete with learning theories, many exhibiting wide variations in interpretation. Most of these theories, however, tend to converge on the conviction that education has responsibilities which transcend the mere imparting of knowledge. The chief responsibility appears to be the development of the individual. Desperate searches are being conducted to discover methods that will meet each individual where he is and will enable him to advance at his own rate to the maximum of his potential. The fact is, however, that only a meager beginning has been made to create the conditions within the school that will do this.

Administrative Criteria. Multiple-grade grouping, other than in rural schools, has not been tested in enough situations to state definitely that it violates sound administrative criteria. Graded grouping

is supported administratively because it appears to meet the criteria that it be simple, objective, defensible to the public, and consistent with current needs. Where the administration of multiple-grade groups is called impractical, the attack must be based more upon a theory of learning than upon the necessities for practical classroom administration.

Multiple-grade grouping is simple in that it does not require a battery of tests or other devices to determine the selection. It could appear much less subjective if the bases for grouping were made known to the public. Preceding discussions would indicate that it could be defended as being in harmony with modern educational emphases.

Assuming that a teacher spends the bulk of her time working with children as individuals and in small groups, multiple-grade grouping does not add significantly to the variability of her class. Such a class, however, allows for greater fluidity and flexibility of grouping, and is appropriate to a class that has many different purposes.

No administrative change will automatically improve the teaching-learning process. Administrative changes affect administrative problems. Multiple-grade grouping is, therefore, no utopian panacea for problems of curriculum and instruction. It does appear to offer a framework within which a teacher or a school can more effectively meet today's educational demands. A most urgent need is to look beyond the confines of existing patterns to patterns which might exist.

CHAPTER III

PROCEDURES AND SOURCES OF DATA

I. INTRODUCTION

This chapter is designed to identify the criteria and the procedures used in the selection of the groups to be studied and the instruments with which to study them. Chapter II discussed the need for additional research in the area of class organization. Graded grouping was challenged on the bases that it no longer meets the criteria for organization which the present century has established. Multiple-grade grouping is considered to be more in harmony with those criteria than many plans now in operation. This chapter will describe the multiple-grade group which was used in this study, and the steps which were taken to make the study as significant as possible.

II. THE SELECTION OF GROUPS

The manner in which the multiple-grade group was identified or structured will be described on page 44 . The actual selection of the single grade group did not occur until just prior to the time established to secure the research data. None of the students or teachers in either the multiple-grade group or the single grade group were aware of the study until the latest possible moment. The decision for this delay was to limit the psychological and functional variables which such knowledge tends to create. The data, which this research sought to secure, were desired to be as close to a normal situation as was possible.

Criteria used to match the multiple-grade group with the single-grade group included the grade, sex, age, and I. Q. of the student; the professional preparation and teaching experience of the classroom teacher, and the socio-economic status of the school.

A data sheet was prepared in the Spring of 1960. (See Appendix I). This sheet identified each member of the multiple-grade group by a code number, grade level to which he was assigned, sex, age, I. Q., and the professional preparation and teaching experience of his classroom teacher. To insure the anonymity of the students participating in this study, no one person had access to the names of the students in both groups.

The data sheet described in the preceding paragraph, accompanied by a letter to each participating teacher (see Appendix II), and post-cards (see Appendix III) to be used for the identification of the students selected were then mailed to the principal of each school selected from the Chattanooga and Hamilton County school systems. Dr. John Letson, then Superintendent of the Chattanooga school system, and Mr. Sam McConnell, Superintendent of the Hamilton County school system had previously notified the principals of the impending study and had solicited their cooperation. A letter to the principal (see Appendix IV) was included with the above described packet, explaining the nature and purpose of the study and the extent to which his cooperation was desired.

According to the plan established, if the principal was willing to cooperate in the study, and had a teacher on his staff who could be matched with a teacher from the multiple-grade group, this principal was requested

to give a packet of materials to such a teacher. Each principal was supplied with four packets in the eventuality that four members of his staff could be matched with the different teachers of the multiple-grade group.

In the event that a principal was willing to cooperate and had one or more teachers who could be matched with teachers from the multiple-grade group, a letter was prepared for that teacher. At all times cooperation was a voluntary matter. No principal was required to participate. No teacher was required, nor were any students to be selected against their wishes. If, however, a teacher were willing to cooperate, and she could secure one or two students who could be matched with students from the multiple-grade group, she was to return the pre-printed postcard after including the necessary data.

Upon receipt of this printed postcard by the researcher, all further correspondence occurred between the researcher and the classroom teacher. A packet, identified only by the code number assigned to a particular student and containing appropriate achievement and personality tests, was returned to the teacher. Complete instructions for the administration of these tests were also included. (See Appendix V.) The dates for the administration of the tests provided a degree of latitude for the teacher's own convenience, yet were limited so that all tests were administered within the span of five days.

When the tests were completed they were returned to the researcher for scoring and tabulation of data. These data constitute a significant portion of this study.

Very few principals declined their cooperation in this study. Not every principal was able to match teachers on his staff with teachers from the multiple-grade group. Even in those cases where such matches could be made, not every teacher was able to find one or two students within their classrooms who could be matched with students from the multiple-grade group.

In a number of instances, children from the multiple-grade group were matched several times with children from the single-grade group. This duplication of effort actually proved valuable when some teachers from the single-grade group failed to return their test materials, or some test materials were invalidated due to incorrect procedures of administration, among other factors.

The analysis of the data thus secured from the evaluative instruments will be presented in subsequent chapters in this study.

III. THE GROUPS

Multiple-grade Group. The establishment of the multiple-grade group was, partially, administratively arbitrary. The students selected for this study were members of the Arthur W. Spalding Elementary School at Collegedale, Tennessee. This school is the campus laboratory school for Southern Missionary College and is located in a rural environment close to Chattanooga, Tennessee. The enrollment of the school was approximately two hundred students in grades one to eight. Grades one to six were organized into multiple-grade classes, though only grades three to six were employed in this study.

The multiple-grade group utilized in this study was actually composed of three sub-groups. One of these units included students from grades three and four. A second unit included students from grades five and six. The third unit included children from grades three to six.

This type of organization was not designed for the purposes of this study. Such organization has existed in this particular school for more than twenty-five years. A number of individuals taking their professional training at Southern Missionary College would be teaching in rural schools, or in multiple-grade schools within urban areas. To serve the needs of these individuals in their practice teaching, the Arthur W. Spalding School has operated a continuous multiple-grade program. Only within the last three years have single-grade units become a part of this school's organization.

Students within the two units made up of grades three and four, and grades five and six were there by administrative assignment. Most of the students within these two units had had previous experience in a multiple-grade unit or class. Only those students with such experience were included in this study.

Students attending a multiple-grade class for the first time were not included in this study. If it had been possible to administer the evaluative instruments both at the beginning and at the end of the school year, these students would have been included. A much more significant analysis could have been made of the total effect of multiple-grade grouping under such conditions. Whereas, such optimum testing conditions were not available, only those students were selected

who could be tested for a cumulative effect of multiple-grade grouping. Two years of multiple-grade experience were considered minimal for the purposes of the study. Many students had as much as six years' experience in multiple-grade classes.

The members of the third unit, grades three to six, were members of this group primarily through parental request. Only in a few instances were children assigned to this room by the administration. Such assignments were made in an effort to maintain a balance between grade levels and sexes represented in this unit. These three units, described above, comprise the multiple-grade group used in this study.

This multiple-grade group is not a normal population sampling. Due to the proximity of Southern Missionary College, a large number of students come from the homes of college faculty members, staff and students. The mean I. Q. for the group included in this study was 112.3. By matching these students in the multiple-grade group with students from a number of single grades throughout the two school systems mentioned, it was felt that the I. Q.'s of the two groups could be more satisfactorily equated. As a result, the mean I. Q. of the single-grade group was 112.6. The difference of three-tenths of one point between these two means is not considered significant.

One of the strengths in using this multiple-grade group rather than one organized experimentally for this study lies in the fact that the students were already accustomed to this type of grouping, and the teachers were experienced in working with such groups. In other studies conducted, neither the students nor the teachers knew what to expect.

It must be pointed out, however, that this multiple-grade group was not organized on an experimental basis. Neither the students nor the teachers in this multiple-grade group were aware of the data to be collected for this study. No instructions were given at the beginning of the school year, or at any later date, regarding special teaching techniques to be employed in the multiple-grade classes.

The fact that this multiple-grade group was not organized in such a way to consciously exploit the potentials of this type grouping has already been recognized as a weakness. By the same token, it is a strength in that the study reveals what is being accomplished in a relatively normal situation.

Classrooms in which these multiple-grade classes operated were equipped with a wide range of instructional materials. Each room had, at a minimum, materials and aids comparable to two single-grade classes. All furniture was movable enabling the teacher to arrange any type of sub-grouping dictated by the experience in which the students would be engaged. Sufficient flexibility existed so that materials which were not a part of the regular classroom inventory could be secured in a matter of moments.

Teachers were encouraged by the administration to disregard grade limitations in favor of individual development. Organization within the school was such that the entire faculty was made acquainted, periodically, with the progress of each child. Children posing problems for a particular teacher were considered by the entire school staff.

A number of children were transcending grade levels in the work they were doing. A given student might be working with materials from three different grade levels. These accommodations to the needs of individuals were not made without resistance, though. Resistance came largely from the school board in its attempts to implement policies of the school system.

Though a teacher might have two or more grades represented in her room and she was responsible to satisfy the demands of the school system by teaching specified content, she was encouraged to combine classes wherever possible. An example of this may be seen in a teacher having four grade levels represented in her classroom. It had been suggested that she disregard the grade level to which a particular student was assigned, and that she regroup children on the basis of their proficiencies and needs. She might, in one instance, combine all four grades into one group; in another, she might subdivide the grades into more than four groups.

Such a procedure necessitated a departure from the traditional method of utilizing textbook facilities. It meant sufficient preplanning to schedule activities in such a manner that more efficient correlation ensued. It meant such radical departures from custom as to proceed from front to back in one book while proceeding from back to front in another. In most instances, however, it meant an eclectic approach to teaching materials.

When presenting new material to one group, the teacher of the multiple-grade class could easily use that occasion for reviewing that

material with another group. In many instances students could provide able assistance in presenting new concepts to members of the group.

In the multiple-grade class, students were encouraged to work with each other, especially the older and the younger. Many times this was not as effective as it might have been due to insufficient teacher-pupil planning. Teachers were also somewhat apprehensive of parental criticism when students reported that they had not recited to the teacher but had worked with a peer most of the day. Nevertheless, teachers of multiple-grade classes do have a greater potential of student assistance than teachers of single-grades.

The ability to work independently is of greater premium in the multiple-grade class than in the single-grade class. The fact that several grade levels are represented limits the number of occasions when the teacher can work with the class as a single unit. The very nature of the classroom organization forces her to abandon the sense of security to be found in the traditional method of all students performing the same task at the same time.

Sometimes teachers expressed concern about the variety of simultaneous activity occurring in the classroom. Even to those experienced in multiple-grade teaching, moments of bewilderment were apparently confronted as these teachers resisted the democratic processes in favor of the security which autocratic teaching seemed to afford.

Due to the fact that relatively extensive sub-grouping was necessary in the multiple-grade class, students were required to govern their own course of action while the teacher was busy elsewhere. Work could

be done independently or in small groups. Another alternative was that a student could listen to and observe the performances of others in the classroom, even though these performances were not at his particular grade level. At times, teachers permitted students to join any group in the pursuit of an activity that was of interest to them. Such opportunities are sharply limited in a single-grade class.

All too frequently, though, these teachers missed the opportunities by which they could have met the criteria of good grouping presented in Chapter I. In some instances these opportunities were probably sacrificed to allay the pressures which they felt would emanate, or because no definite philosophy of multiple-grade teaching has yet been articulated.

To be remembered throughout this study is the fact that the multiple-grade group utilized does not represent the ideal. As yet, the ideal in multiple-grade grouping awaits definition. What is represented, however, is a relatively normal performance of multiple-grade teaching in an environment where the prices of inadequate materials and poor quality teaching are not exacted. It is this type experience that is being tested.

Single-grade group. Students in the single-grade group approximate a random sampling of the population, within the limits described earlier in this study. Tests were administered to more than one hundred students from the more than eighty schools in the Chattanooga and Hamilton County, Tennessee, school systems. These students had been matched with students from the multiple-grade group as described in

Chapter I. Of the tests returned, only sixty-eight were used in the study. Some were eliminated due to improper administration of tests, insufficient data returned, transfer of the multiple-grade student with whom the single-grade student was matched, or duplicated test returns when more than one student from the single-grade group was matched with a student from the multiple-grade group. In those instances where more than one single-grade student was matched with a multiple-grade student, the test results bearing the earliest post mark were used for the study.

The purpose in selecting students from many schools rather than the selection of a specific single-grade class was to produce as close to a random sampling as possible and yet maintain a homogeneity of I. Q.'s between the two groups. In securing a random sample, it was believed that such undesirable variables as teacher strengths and weaknesses, socio-economic factors, and cultural factors would have negligible effects upon the overall results.

Other controls which were effected in matching students in the multiple-grade group with those in the single-grade group included:

1. Teacher experience. To minimize the impact of the strengths and weaknesses of particular teachers on the results of this study, students for the single-grade group were selected from classrooms maintained by teachers who were comparable in professional preparation and years of teaching experience to that of the teachers of the multiple-grade group. In each instance the teacher of the single-grade group had to possess the same or comparable

professional degree, and to have had no greater than three years difference in teaching experience from that of the teacher in the multiple-grade group with whom she was being matched. This limitation increased the difficulty of securing matched pairs, but it minimized the influence which teacher education and experience would have had upon differences in the results. The test returns of six students from the single-grade group were disqualified through failure of the school principal or the classroom teacher to meet the above criteria. Fifty-seven different teachers from the single-grade group were matched with the three teachers of the multiple-grade group.

Another control of this variable was in the arbitrary limitation of the number of students from any particular single-grade class to two. It was possible that one teacher could have matched a larger number of students from the multiple-grade group with students in her classroom. This, it was believed, would have significantly influenced the test results of that particular grade level in terms of that teacher's specific strengths and weaknesses.

2. Socio-economic Factors. To limit the influence of extreme differences between the socio-economic levels of the school from which the multiple-grade group was selected and those from which the single-grade group was selected, a number of schools from Chattanooga and Hamilton County were eliminated

from the study. The criteria for this elimination was subjective, but included the counsel of E. S. Chace, Director of the Arthur W. Spalding School, and individuals acquainted with the various schools of the above named school systems.

3. Sex. Research conducted by Olson, Terman, Goodenough, and others¹ has established the fact that there is a difference in the rate of maturation between boys and girls. In Chapter II of this study, Freeman's findings that such differences do have some effect upon school achievement were cited.² To limit this variable, as far as possible, students from the multiple-grade group were matched with students in the single-grade group by sex. Table I presents a breakdown of the sexes by grades. There were 33 girls and 35 boys in grades three to six used as subjects in this study.

Another determinant affecting this decision was the sociological data presented by such researchers as Benedict³ and Dollard⁴ indicating that some academic achievement was culturally influenced according to sex.

¹For a review of the results of many investigations, see: Anne Anastasia, "The Nature of Psychological Traits," Psychological Review, LXX (1948), 127-138.

²Harris, op. cit., 1206, 1207.

³Ruth Benedict, Patterns of Culture (Boston: Houghton Mifflin Company, 1934).

⁴John Dollard, Criteria for the Life History (New London: Yale University Press, 1935).

4. Age. While it is generally agreed that there is wide variations among individuals of the same chronological age, it was believed that such variations could be minimized if students from the two groups could be matched by age. A tolerance of six months was allowed between the ages of students from the multiple-grade group and the ages of those matching students from the single-grade group. The mean age for the multiple-grade group was 10 years and 7 months. The mean age for the single-grade group was 10 years and 3 months. The correlation between these ages and achievement appears higher as a result of age being used as a criteria for matching. Table II presents a comparison of the ages for each pair of matched students.

TABLE I
SEX OF SUBJECTS FROM MULTIPLE-GRADE AND SINGLE-GRADE GROUPS

MULTIPLE-GRADE			SINGLE-GRADE		
Grade	Girls	Boys	Grade	Girls	Boys
3, 4	8	14	3	8	13
5, 6	15	12	4	4	6
3 - 6	10	9	5	11	7
			6	10	9
Totals	33	35		33	35

5. Intelligence Quotient. Recognizing that a child may have more than one I. Q., it was, nevertheless, deemed important that the children in the two groups be matched in terms of

TABLE II

AGE OF SUBJECTS FROM MULTIPLE-GRADE AND SINGLE GRADE GROUPS
EXPRESSED IN YEARS AND MONTHS

Code Number	Multiple- Grade	Single- Grade	Code Number	Multiple- Grade	Single- Grade
101-201	8-10	9-1	144-244	10-10	11-4
102-202	9-8	9-5	145-245	11-10	12-2
103-203	10-5	9-11	146-246	12-5	12-3
104-204	9-5	9-5	147-247	12-5	12-0
105-205	9-1	8-7	149-249	11-5	12-0
106-206	9-5	9-7	150-250	11-7	11-9
107-207	9-7	9-2	151-251	11-5	11-7
108-208	9-6	9-8	152-252	12-0	11-10
111-211	9-3	8-9	153-253	11-6	12-1
112-212	10-9	10-3	154-254	11-3	11-6
113-213	9-9	9-5	155-255	12-9	12-6
114-214	9-5	9-6	156-256	11-4	11-8
116-216	8-8	8-11	157-257	11-8	11-7
117-217	9-3	9-1	158-258	11-3	12-0
118-218	10-3	9-9	159-259	11-5	12-3
119-219	10-0	9-6	160-260	10-0	9-8
121-221	10-8	10-2	161-261	9-9	9-6
123-223	10-8	10-4	162-262	8-7	9-0
124-224	10-11	11-3	162-263	9-11	9-7
125-225	10-6	10-6	164-264	8-4	8-9
126-226	10-8	10-2	165-265	9-5	9-11
127-227	10-4	10-1	166-266	9-9	10-0
130-230	11-3	11-4	167-267	9-8	9-6
131-231	11-5	11-2	169-269	9-9	9-6
132-232	11-6	11-1	170-270	10-9	10-7
133-233	11-3	11-5	171-271	12-0	11-7
134-234	11-8	11-6	172-272	10-10	11-2
137-237	10-3	10-7	173-273	11-9	11-6
138-238	11-1	10-8	174-274	11-7	11-10
139-239	11-10	11-8	175-275	11-8	11-7
140-240	12-0	11-7	176-276	12-3	12-6
141-241	11-6	11-10	177-277	12-1	12-6
142-242	11-5	11-1	178-278	11-5	11-0
143-243	11-8	12-2	179-279	11-11	11-11

general intelligence. Because it is practically impossible to discriminate performance differences between I. Q.'s of less than five points spread, a five-point degree of tolerance was permitted when matching the students for this study.

The I. Q.'s of each matched pair of students, as measured by the Lorge-Thorndike Intelligence Tests, are presented in Table III. The mean I. Q. of the multiple-grade group was 112.3; that of the single-grade group was 112.5.

6. Grade Placement. One additional limiting factor was employed in the matching of the students from the two groups. While the multiple-grade group was organized on a different basis than the single-grade group, the grade structure was not entirely limited. Many of the teaching-learning experiences transcended grade line barriers; yet, the major portion of the student's work was performed within the limiting boundaries of grade placement. Much of the academic materials which was used by the students in these multiple-grade units was determined by grade level. Though the multiple-grade organization afforded many opportunities for students to cross grade boundaries, those boundaries, nevertheless, were there. The subjects of this study were, therefore, matched according to grade placement in addition to the other factors already identified.

TABLE III
INTELLIGENCE QUOTIENTS OF SUBJECTS IN MULTIPLE-GRADE
AND SINGLE-GRADE GROUPS

Code Number	Multiple- Grade	Single Grade	Code Number	Multiple- Grade	Single- Grade
101-201	98	101	144-244	123	120
102-202	110	108	145-245	112	112
103-203	94	96	146-246	104	101
104-204	100	100	147-247	92	96
105-205	115	115	149-249	91	91
106-206	99	101	150-250	110	107
107-207	116	119	151-251	97	99
108-208	110	111	152-252	110	108
111-211	115	112	153-253	104	106
112-212	118	113	154-254	110	114
113-213	130	131	155-255	114	111
114-214	107	110	156-256	99	103
116-216	101	104	157-257	131	136
117-217	130	125	158-258	102	101
118-218	122	120	159-259	130	130
119-219	120	116	160-260	100	103
121-221	131	131	161-261	101	106
123-223	126	125	162-262	103	109
124-224	115	118	163-263	133	130
125-225	89	86	164-264	105	110
126-226	120	122	165-265	119	118
127-227	116	113	166-266	108	106
130-230	131	130	167-267	82	86
131-231	116	111	169-269	142	138
132-232	107	106	170-270	108	109
133-233	125	128	171-271	107	110
134-234	104	104	172-272	119	121
137-237	122	123	173-273	109	109
138-238	127	132	174-274	113	115
139-239	125	123	175-275	121	119
140-240	103	106	176-276	116	120
141-241	98	95	177-277	133	132
142-242	108	104	178-278	151	146
143-243	81	81	179-279	108	113

IV. EVALUATIVE INSTRUMENTS

The criteria established for the selection of the evaluative instruments included validity, ease of administration, ease of interpretation, economy, and objectivity. It was impossible to secure purely objective data in all the areas from which data were desired. Subjective evaluative data were, therefore, included in the study. Such subjective data are considered significant in those areas in which attitudes and opinions are being measured.

Five instruments were used to secure the data for this study. Three of these instruments were commercially prepared standardized tests that seemed best able to provide the data desired. The other two instruments were designed for the purpose of this study. A description of these instruments and the administration of such is given below.

Intelligence Test. The Lorge-Thorndike Intelligence Tests, 1957 edition,⁵ were used to match the students in the single-grade group with those in the multiple-grade group. The fact that these tests were in current use throughout the two school systems from which the single-grade group was to be selected met the criteria of economy. The data from these tests were immediately available for the study, thus solving the problem of administration. The availability of this data expedited the matching of the students from the multiple-grade and single-grade groups. Whereas two other series of intelligence tests were used by

⁵Irving Lorge and Robert L. Thorndike, The Lorge-Thorndike Intelligence Tests (Boston: Houghton Mifflin Company, 1957).

the Arthur W. Spalding Elementary School, from which the multiple-grade group was selected, it was necessary to administer the Lorge-Thorndike Intelligence Tests to this group for the study.

Form A of this test was used for all students; Level 2, a non-verbal battery was used for students in grade three; Level 3, a verbal battery, was used for students in grades four through six. The items in these tests, for the most part, deal with relationships. In answering them, a pupil is required to find a principle and then apply it. The tests are designed to measure reasoning ability.

The validity of an intelligence test is more difficult to evaluate than its reliability. The Examiner's Manual⁶ presents a very limited number of statistics on validity, recording the correlations with three other well-known group tests of intelligence as .77, .79, and .84. The three other tests are not identified. A more extensive discussion is presented on the "rational" validity of the test, drawing attention to the fact that the test contains what the authors consider a good test should contain. While the predictive value of a student's achievement by these tests may be questioned, it is believed that the Lorge-Thorndike Intelligence Tests perform an adequate function in evaluating verbal and non-verbal reasoning.⁷ Freeman identifies this intelligence test as one of the best for group testing.⁸

⁶Examiner's Manual: The Lorge-Thorndike Intelligence Tests (Boston: Houghton Mifflin Company, 1957), p. 14.

⁷Frank Freeman, "The Lorge-Thorndike Intelligence Tests," Fifth Mental Measurements Yearbook, Oscar K. Buros (ed.) (Highland Park, New Jersey: The Gryphon Press, 1959), p. 353.

⁸Ibid., p. 350.

After the tests were administered to the students in the multiple-grade group, the I. Q. scores were compared with the scores in the students' permanent records. In those instances where there was a variation of more than five points between the I. Q. score obtained from the Lorge-Thorndike Intelligence Test and the I. Q. scores recorded in the student's permanent record, that student was not included in the study. The data for the other children were compiled and included with the other information on the data sheet described above.

Achievement Test. The Stanford Achievement Test⁹ was selected to measure the desired areas of academic achievement. This test was regularly used in the systems from which both the multiple-grade and the single-grade groups were chosen. The many individuals who were needed to assist in the administration of the test were already familiar with the instrument. The students, also, were accustomed to the format of this instrument. For reasons of economy and ease of administration, therefore, the selection of the Stanford Test was a logical one.

The limitation of any nationally standardized test was considered before such an instrument was chosen. One of the general weaknesses of the data in this test is brought into focus when an examination is made of the contents of the test as compared with the curriculum of the particular grades and groups involved in the study. It was impossible, for the purposes of this study, to construct an instrument of any reasonable

⁹Truman L. Kelley, et al., Stanford Achievement Test (Yonkers-on-Hudson, New York: World Book Company, 1953).

degree of validity to meet the varied curricula of the systems--rural and urban, traditional and progressive--from which the groups used in this study emanated.

The authors of the Stanford Test, while citing no statistics on the validity of the instrument, present an extensive discussion regarding the standardization and construction of the test. Emphasis is given the fact that the content ". . . was selected on the basis of a thorough analysis of the most widely used series of elementary textbooks in the various subjects, of a wide variety of courses of study, and of the research literature pertaining to children's concepts, experiences, and vocabulary at successive ages or grades."¹⁰ All content had been subjected to rigorous pre-publication experimentation in scores of schools throughout the country. The tests also give consideration to the trend toward the teaching of meanings and understandings, rather than mere factual knowledge. Buros classifies the Stanford series as a conservative, middle-of-the-road, instrument.¹¹ Such an instrument was felt to be the best for this study.

Form M, published in 1955, was distributed to all students who were participating in either the multiple-grade or single-grade groups. The Elementary Battery was utilized for students in grades three and four, the Intermediate Battery for students in grades five and six.

¹⁰Truman L. Kelley, et al., Stanford Achievement Test: Directions for Administering (Yonkers-on-Hudson, New York: World Book Company, 1953), p. 16.

¹¹N. L. Gage, "The Stanford Achievement Test," Fifth Mental Measurements Yearbook, Oscar K. Buros (ed.) (Highland Park, New Jersey: The Gryphon Press, 1959), p. 26.

Personality Test. After consideration was given to a number of personality tests, the California Test of Personality¹² was selected as the instrument to be used in this study. Unlike many of the other personality tests considered, this test did not necessitate the subjective evaluation of a third party. While the test was designed so that students could mark a Yes-No answer in response to questions, the questions are so constructed as to reduce to a minimum any suggestion that they be answered a certain way. As with most personality inventories, the "right" answer is probably obvious to all except the very naive.

One serious limitation of this particular test is the disproportionate number of "No's" among the correct answers. In some sub-tests, all the correct responses are "No", rather than the 50 per cent to be expected. For the entire battery, the ratio of "No's" is between 60 and 70 per cent. It would appear that the student answering the questions on the basis of chance would show up to be seriously maladjusted.

The sub-tests, however, dealt with specific areas with which this study was interested. Some of the sub-tests were omitted after an item analysis indicated that the questions were more applicable to the home environment than that of the school. These sub-tests included Personal Freedom, Social Standards, Family Relations, and Community Relations.

The teachers in the school systems from which single-grade groups were selected had had no previous experience with the California Test of

¹²Louis P. Thorpe, Willis W. Clark, and Ernest W. Tiegs, California Test of Personality (Los Angeles: California Test Bureau, 1953).

Personality. Whereas the test and manual are made up in such a manner as to facilitate ease and accuracy in administering the test, this instrument was deemed acceptable. In spite of the criticism relevant to personality tests, Sims states, "The California test would appear to be among the better ones available."¹³

The Primary Battery was used for students in grade three, the Elementary Battery for students in grades four through six.

Questionnaire for Parents. To secure the attitudes and opinions of parents regarding multiple-grade grouping, it was necessary to devise a special evaluative instrument. A number of attitudes and assumptions were listed, concerning multiple-grade grouping. These were combined and refined until an instrument with seventeen questions was developed. This was printed on a single sheet of paper with room for additional comments provided. Questions were designed to elicit a Yes-No answer.

The questionnaire was presented to the patrons of the Arthur W. Spalding School on the first day of the school year. At this time most parents visited the school to register their children. Over one hundred questionnaires were returned, but only ninety of these were used for this study. Those eliminated were only partially completed. Persons completing this questionnaire included individuals whose children had been in multiple-grade groups before, as well as individuals whose children were entering a multiple-grade unit for the first time. Of this latter group, some were

¹³Verner M. Sims, "The California Test of Personality," Fifth Mental Measurements Yearbook, Oscar K. Buros (ed.) (Highland Park, New Jersey: The Gryphon Press, 1959), p. 39.

parents of children transferring from single-grade schools; others were parents of children entering school for the first time. A copy of the questionnaire prepared for the parents can be seen in Appendix VI.

Questionnaire for Teachers and Administrators. It was also necessary to construct an evaluative instrument to probe the attitudes and opinions of teachers and administrators. This instrument was three pages in length and included thirty-two assumptions regarding multiple-grade grouping to which the respondent was to express his reactions on a five-point rating scale. Whereas many of the respondents would be teaching-administrators, it was believed that a combined questionnaire would be satisfactory. A copy of this questionnaire may be found in Appendix VII.

The respondents were asked to classify themselves as to whether they had taught only in single-grade groups or multiple-grade groups, they had taught in both single-grade and multiple-grade groups, they had been principals of schools with only single-grade or multiple-grades, or they had been principals of schools with both single-grade and multiple-grade groups. From this data it was possible to classify them into four groups for comparative purposes in this study. A detailed description of these groups will be given in Chapter VI.

The analysis of the data thus secured from the evaluative instruments described above will be presented and interpreted in the following chapters.

CHAPTER IV

ANALYSIS OF ACADEMIC ACHIEVEMENT

I. INTRODUCTION

One of the hypotheses to be tested in this study was that students in multiple-grade classes would achieve more academically than students grouped in single-grade classes. To test this hypothesis, it was necessary to secure data from which an evaluation of academic growth could be effected. It has been pointed out previously that a before-after testing of academic achievement would have produced more significant data than it was actually possible to secure. The limitations of time made it necessary to secure only one set of data from which to make the analysis. To make this as significant as possible, only those students having more than one year's experience in a multiple-grade class were included in this study as members of the multiple-grade group.

The data for this analysis were secured from the Stanford Achievement Test, Elementary and Intermediate Batteries. These tests were administered to all students participating in the study, within a time limit of five days. Reasons for the selection of this test have been discussed in the preceding chapter. It was considered the best test available to secure a type of data from which a comparison could be made. An analysis was made to determine the significance of the difference between the mean scores in selected areas of academic achievement.

II. STATISTICAL PROCEDURE

Fisher's T test for the difference between the means was employed in the analysis of the data secured from the Stanford Achievement tests.¹ The formula used was:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S_{\bar{X}_1} - S_{\bar{X}_2}}$$

where the Standard Error of the Means was computed by:

$$\sqrt{\left(\frac{\sum X_1^2 + \sum X_2^2}{N_1 + N_2 - 2} \right) \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}$$

The t-values resulting from the above calculations were evaluated for significance at the 1 per cent and 5 per cent levels, with twenty degrees of freedom for grade three, nine df for grade four, seventeen df for grade five, and eighteen df for grade six.

T-values for the difference between the means in scores of Paragraph Meaning, Word Meaning, Spelling, Language, Arithmetic Reasoning, and Arithmetic Computation are presented in tables on the following pages. Each table identifies the mean of the score achieved by each grade level in both the multiple-grade and single-grade groups. The t-value will be marked if the level of confidence is at either 5 per cent or 1 per cent.

A short discussion will accompany each table. Conclusions which the data appear to support will be presented in this discussion. More comprehensive conclusions will be presented in the summary.

¹Allen L. Edwards, Statistical Methods for the Behavioral Sciences, (New York: Rinehart and Company, Inc., 1954), pp. 253, 254.

III. PARAGRAPH MEANING

Sub-grouping within the classroom has been evident in no other area more than that of reading. Most teachers of primary grades in the elementary school are thoroughly acquainted with "reading groups". To a large degree, these groups are flexible with transitions from one group to another occurring whenever conditions warrant. Most children appear to accept such grouping as a natural experience.

The purpose of such grouping is, apparently, to enable children to work at their own level with others who share a similar level. Experience indicates, however, that even groups have their levels within the groups, though the range is somewhat reduced over that of the entire class. Enough instances of children differing by two or more grade levels in reading, or other academic abilities, exist to make such conditions a generally accepted fact.

At the outset of this study, it was believed that multiple-grade grouping offers a teacher a wider range of grouping possibilities. This, in turn, would enable the faster or slower student to work with others of like ability, when desirable, disregarding the actual grade level at which the student was placed. With a wider range of abilities and skills manifested in the classroom, most students should be able to profit from this enriched environment and make consequent development.

If the hypothesis that students in multiple-grade groups make greater development in reading skills is valid, data secured from the Stanford Achievement test should indicate a significant difference in the

achievement of those in multiple-grade groups compared with those in single-grade groups. The Paragraph Meaning sub-test uses a technique somewhat different from most multiple-choice tests. The pupil chooses among four alternatives for each of the one to three words missing from a given paragraph. The student must have a comprehension of the paragraph as he reads to correctly identify the missing word. The word must fit into the context of the paragraph. This process differs from that of many tests in which the student must select multiple-choice answers to questions about the paragraph. The mean scores achieved by each grade level are presented in Table IV.

TABLE IV
MEAN SCORES IN PARAGRAPH MEANING OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	38.38	36.10	.739
4	42.40	41.40	.109
5	39.78	37.22	1.070
6	40.53	38.84	.717

Though there is no significant difference in the difference between the means of any of the four grade levels, at the 5 per cent level of confidence, it should be noted that the multiple-grade group has achieved consistently higher achievement scores in each grade level. Is this difference due to the nature of the multiple-grade organization or

to the nature of the group itself? Data presented in Chapter VII would indicate that teachers of multiple-grade units do not take advantage of the opportunities to transcend grade barriers in the various content areas. Many such teachers would appear to be sub-grouping only within the confines of each grade level. It is probable that the multiple-grade group in question has done little different.

If the teachers of this multiple-grade group had fully exploited the possibilities of grouping inherent within the multiple-grade organization, it would appear logical to find a cumulative difference between mean scores. Such a difference is not revealed by the data presented. It would appear, therefore, that the difference which does exist between the mean scores of the two groups is due to the exposure to a wider range of curriculum experiences of the students in the multiple-grade group.

The above data support neither the findings of Foshay or Rehwoldt, reported in Chapter I. Foshay indicated that the graded groups did significantly better in reading while Rehwoldt reported that the multiple-grade group exceeded the single-grade group in reading. What is probably indicated is that in those multiple-grade units not consciously engaged in experimentation, little difference in reading achievement results.

IV. WORD MEANING

Closely related to paragraph meaning is word meaning. In fact, a large degree of the success in the paragraph meaning test depends upon one's knowledge of word meaning. Unless a planned program in vocabulary building were in operation in either the multiple-grade or single-grade

groups used in this study, the results on the Stanford Achievement test should closely parallel those in the Paragraph Meaning sub-test.

Some people raise the question as to whether vocabulary test items actually belong in an achievement test. Such items are almost universally included in tests of intelligence. The validity of including such data in this study lies in the fact that the mean I. Q.'s of the multiple-grade and single-grade groups are so close. If vocabulary test items are best suited for intelligence tests, then the results found in Table V should be very close. If they are suitable for achievement test purposes, then, in the light of the preceding test, the results should again be relatively close. The actual results are presented in Table V.

TABLE V
MEAN SCORES IN WORD MEANING OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	29.95	29.14	.739
4	33.90	33.30	.102
5	39.11	38.72	.140
6	41.74	39.47	1.308

As in the results of the Paragraph Meaning sub-test, there is no significant difference in the mean scores of the Word Meaning sub-test at any of the four grade levels. Again, however, the multiple-grade group achieves higher mean scores than does the single-grade group. This may

be explained on the same basis as the difference in the scores of the Paragraph Meaning sub-test. In the data presented in Table V, however, it will be noticed that there is a gradual increase in the differences between the means. Is it possible that association with older children in the multiple-grade group, with the resultant exposure to a wider range of vocabulary usage, tends to enrich the vocabulary of members within this group? Such, appears to be the case.

Why, then, was there not a parallel increase in the differences between the means in the Paragraph Meaning sub-test? It has been pointed out that success in that sub-test depends largely upon one's vocabulary. The difference would appear to lie in the nature of the two tests. The Paragraph Meaning sub-test requires the student to select a correct answer before proceeding to the next blank. In the event that a preceding blank is incorrectly filled, the context, in many instances, is changed to the extent that subsequent selections are more difficult. In the Word Meaning sub-test, each test item is independent. All context clues to the selection of the correct word are given in the partial sentence. No context clue is dependent upon the student's selection.

Data presented in Chapter VII indicates that many teachers of multiple-grade groups are reluctant to cross grade barriers. This reluctance not only adds to the teacher's problems of meeting the various needs within a multiple-grade group, but also robs most students of invaluable opportunities to be found in wider grouping practices.

Until more teachers and administrators are willing to ignore the artificial boundaries that grades impose, multiple-grade grouping will have little, if anything, to offer in the solution of class organizations.

V. SPELLING

Closely related to the development of vocabulary are skills in spelling. To further test the hypothesis that students in a multiple-grade group will achieve more academically than students in a single-grade group, the scores in the Spelling sub-test were compared. The data from this test are presented in Table VI.

TABLE VI
MEAN SCORES IN SPELLING OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	40.00	36.00	1.078
4	44.00	40.50	.240
5	52.78	49.19	1.092
6	56.16	52.89	.827

The spelling tests were of two types. The Primary Battery required students to write a list of words dictated by the test administrator. The Elementary Battery required the student to select the correct spelling from multiple-choice items. As to which of these types is better depends, probably, upon whether students should write their own words correctly or should recognize misspellings in the works of others. Both skills are important. For the purpose of this study, the answer to this question was important only to the extent that either the multiple-grade group or the single-grade group pursued the development of one of these

skills exclusively. No evidence of such practice was apparent.

No significant differences at the 1 per cent or 5 per cent levels of confidence were determined between the means in the Spelling sub-test. The pattern established in the results of the Paragraph Meaning sub-test also appears in this test. This pattern is the consistent difference in means which appears throughout the four grade levels. In each instance, the multiple-grade group is from three to four points above the single-grade group. This difference interpreted in terms of grade level indicates the multiple-grade group to be approximately one-half year ahead of the single-grade group in grade placement. Foshay's study, reported in Chapter I, revealed that multiple-grade group to be one-half year behind in grade placement.

It has been pointed out previously that the multiple-grade group participating in this study was operating largely within the limitations imposed on single-grade groups. Limited effort was exerted by the teachers to transcend grade barriers in grouping students. In spite of this, students were exposed to a wider range of academic activities and materials than would have been true in a single-grade classroom. Through such exposure, it was believed that students would find their own learning enriched. Though this may occur to a limited degree, the absence of encouragement or planning for such by the teacher, sharply limits the results of such an experience.

VI. LANGUAGE

The development of language occurs both in the classroom and outside. That phase of language development measured by the Stanford Achievement Test, however, is largely limited to the classroom. Composed of two-choice items, the Language sub-test measures skills in the mechanics of grammar. The R-W formula is applied to correct for guessing though no instructions against guessing were given; nor were such instructions included in the test manual. The data from this sub-test are presented in Table VII.

TABLE VII
MEAN SCORES IN LANGUAGE OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Grade	Single-grade Grade	t Value
3	50.67	46.76	.865
4	53.30	51.80	.002
5	44.33	38.89	1.560
6	39.95	41.11	.281

More inconsistencies appear in these data than in any heretofore. For the first time the single-grade group has achieved a higher mean score (sixth-grade level) than the multiple-grade group, though the difference is not statistically significant. No statistical significance marks the difference in means at the other grade levels, though the multiple-grade group continues to maintain a slightly higher mean score.

The deviation in the mean score of the sixth-grade level in the multiple-grade group may be a reflection of curriculum practice within one or both of the multiple-grade classes. Chapter III pointed out that the majority of the students in the Arthur W. Spalding School from which the multiple-grade group was selected, were in classes made up of only two grade levels. Data presented in Table VII indicate that there was less gain between grades three and four and grades five and six in the multiple-grade classes than in the single-grade groups. It is possible that the teachers of these multiple-grade classes were giving relatively less attention to the mechanics of grammar at the grade levels indicated. Data would refute any conclusion that the children in the multiple-grade classes were not learning the mechanics of grammar.

Capitalization, punctuation, sentence structure, and similar aspects of language are quite generally allocated to specific grade levels in the majority of language textbooks. The extent to which the teachers of multiple-grade classes are operating those classes within the limitations of grade placement in terms of student experiences and content, would determine the degree to which the results of scores achieved by multiple-grade groups would parallel results achieved by single-grade groups. Foshay's study reported in Chapter I, indicated that the graded group was superior in language usage while Rehwoldt's study, also reported in Chapter I, indicated that the multiple-grade group did significantly better. Further research in this area is apparently necessary.

VII. ARITHMETIC REASONING

Arithmetic is, in some respects, culture bound. What a student learns in the area of arithmetic skills and content is dependent largely upon the curriculum of the specific school and the specific classroom within that school. Students are able to pick up much material in the other content areas and learning skills from experiences outside of the school. Experiences in arithmetic learning have, in the past, been limited largely to those determined by the classroom program. Though this is undergoing change, test scores in arithmetic probably reflect the curriculum as much as any other given area.

If the total experiences within the multiple-grade classroom enhance a child's opportunity to become acquainted with a wider range of knowledge and skills than is possible in a single-graded classroom, it appears logical to assume that achievement scores in this area will reflect that tendency. The mean scores of the two groups in arithmetic reasoning are presented in Table VIII.

TABLE VIII

MEAN SCORES IN ARITHMETIC REASONING OF MULTIPLE-GRADE AND SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	31.00	32.33	.409
4	37.60	37.90	.251
5	33.78	31.00	1.233
6	38.11	35.84	1.197

The data in Table VII has proved to be no exception by providing any significant difference between the means of the two groups, at any grade level. Data for the primary grades do indicate a slightly greater achievement by the single-grade group. It was assumed as the basis for one of the hypotheses being tested by this study that children would increase in their reasoning ability as they interacted with other children who had already developed reasoning skills. This contention may appear to be supported by data from the intermediate grades, rather than the data from the primary grades. The mean gain, however, between the fifth and sixth grades in both groups is practically the same. Association with sixth grade students, apparently helped little in developing the reasoning ability of fifth grade students in the multiple-grade group. The mean gain between the third and fourth grade groups slightly favors the students in the multiple-grade group. The difference is too slight to have any significance.

The only gain indicated by the data in Table VIII which might be indicative of organizational advantage in favor of one type group above the other is the gain achieved by students in the fifth grade. The fact that this gain is made during the fifth grade and maintained during the sixth might indicate a slight learning advantage through association with older students. In the study referred to above, Foshay indicated that the single-grade group made significantly better gains in arithmetic. Again, Rehwoldt's study indicates the reversal in the groups which he measured. It would appear that the internal organization of the multiple-grade group is an important factor in the achievement of students within such groups.

VIII. ARITHMETIC COMPUTATION

The same assumptions held relative to arithmetic reasoning were held relative to arithmetic computation. If children were constantly listening to and interacting with other children who had developed greater competencies in computational skills, it appeared logical to assume that the younger children would more quickly develop those skills than they would in a single-grade class where such skills were largely excluded by grade barriers.

The Stanford Achievement Test contained a sub-test designed to measure the computational skills acquired by children. The data secured from this sub-test are presented in Table IX.

TABLE IX

MEAN SCORES IN ARITHMETIC COMPUTATION OF MULTIPLE-GRADE AND SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	28.29	27.05	.524
4	33.70	33.90	.033
5	28.61	27.00	.719
6	37.05	33.05	1.659

In this final sub-test of academic achievement, no support is found for either Foshay's data, referred to above, indicating that the single-grade group did superior in arithmetic, or for Rehwoldt's data, also referred to above, that the multiple-grade group did better in

arithmetic. Though the multiple-grade group did achieve higher mean scores, except for a very slight loss on the fourth grade level, none of these scores were significant at the 1 or 5 per cent levels of confidence. Other than being a reflection of individual curriculum practice, there is insufficient data to indicate the cause of the existing differences.

IX. SUMMARY

At the outset of this study it was assumed that children in multiple-grade groups would achieve more academically than children in single-grade groups. Assumptions upon which this hypothesis was based included that children, in multiple-grade groups, associate with a wider age range than children in single-grade groups; that children in multiple-grade groups are exposed to a wider range of curriculum materials and experiences; that children in multiple-grade groups are grouped according to their needs and abilities, irrespective of their grade placement; and, that children in multiple-grade groups are both challenged and stimulated in the pursuit of excellence.

To test this hypothesis, data were secured from the Stanford Achievement Tests. These data were subjected to Fisher's t-test for significance of difference between the means. Both the 1 per cent and the 5 per cent levels of confidence were used.

The data were presented in six tables on the preceding pages. Each table presented data relevant to a specific area of academic achievement. Data were grouped in order to determine the significance of difference between the means at each of the four grade levels included in this study.

In none of the academic areas analyzed were there any significant differences between the means. Almost consistently, though, the multiple-grade groups achieved higher mean scores. Nowhere was there identifiable evidence indicative that these gains were the results of multiple-grade grouping. It was impossible, from the data presented, to draw conclusions in support of either Foshay's study or Rehwoldt's study, both reported in Chapter I.

From the data presented in the preceding pages, it appears possible to draw the following conclusions:

1. Multiple-grade grouping, as it is practiced by the participants in this study, offers no significant academic advantage over single-grade grouping.
2. On the other hand, multiple-grade grouping can be expected to produce academic achievement commensurate with single-grade grouping. Where it appears more feasible to operate a multiple-grade unit, it can apparently be done with no loss in academic achievement.
3. If multiple-grade grouping does contain a potential for greater academic achievement, mitigating factors such as rigidly imposed grade limitations in the teaching-learning process not revealed by the Stanford Achievement Tests were nullifying that potential.
4. Additional research of an experimental nature in which multiple-grade groups are organized to exploit their fullest potential needs to be carried on over a longer period of time to determine the effects of multiple-grade grouping.

CHAPTER V

ANALYSIS OF PERSONALITY AND SOCIAL DEVELOPMENT

I. INTRODUCTION

Children become involved in interpersonal situations with other children, older and younger, or adults that have varying degrees of emotional impact. Some of these situations are casual and relatively inexpressive; others are highly charged with emotion and significant communication. The latter are probably much less numerous than the former in school life but are more important in personality formation.

The emotional intensity with which a classroom teacher, or a student's peers, encourages maturation carries over into attitudes toward achievement. A teacher, or society, which values individual achievement and initiative will begin to inculcate these goals early in life. Maturation phenomena like reading skills and cursive handwriting may be invested with strong emotional significance; or, students may be compared with each other for progress in such skills.

The satisfaction which a child realizes through increasing capacities and abilities promotes feelings of self-confidence and adequacy. These feelings may be achieved apart from any deliberate encouragement he may receive or they may be emotionally enmeshed. The total impact of these interpersonal relations helps to shape the individual's attitude toward himself; the individual's self-concept helps to shape his behavior.

Today's society has changed the teacher's role in the teaching-learning process. The requirement is no longer simply to instill content into the child's mind but to develop his social skills. Society requires that the child leave school fully equipped to respond to the signals of the group in which he finds his membership.

One of the hypotheses of this study was that the multiple-grade environment more closely approximated the real-life environment in which the student moved and would move. In the family environment, most children have interrelations with adults and siblings. For most children this is a dynamic experience casting them in a variety of roles. The interactions with others older and younger than themselves demands a personality integration that cannot be achieved when the interaction is constant in character. Continuity between family-child relationships and peer group relationships is assumed to be more effectively achieved in the multiple-grade class. The learning in the one situation is therefore repeated and reinforced in the second.

The degree to which this continuity exists would determine, to a large degree, the personality development of the individual. The role which the school plays in this drama should not be underestimated.

To test the hypothesis that the multiple-grade class more effectively maintains this continuity and enhances the personality and social development of the student, it was necessary to procure evaluative data. A number of instruments were examined; the one best fitting the needs of this study was the California Test of Personality described in Chapter III.

This test produced scores which could be subjected to an analysis of the significances between the means. Only selected sub-tests were used in gathering data for the analysis. Those areas which largely reflected other factors shaping personality and social development were eliminated.

II. STATISTICAL PROCEDURE

The same procedure was used for these data as was used with the data in Chapter IV. This procedure was Fisher's T test for the difference between the means.¹ The formula employed was:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S_{\bar{X}_1} - S_{\bar{X}_2}}$$

where the Standard Error of the Means was computed by:

$$\sqrt{\left(\frac{X_1^2 + X_2^2}{N_1 + N_2 - 2} \right) \left(\frac{1}{N_1} + \frac{1}{N_2} \right)}$$

The t-values resulting from the above calculations were evaluated for significance at the 1 per cent and 5 per cent levels of confidence, with twenty degrees of freedom for grade three, nine df for grade four, seventeen df for grade five, and eighteen df for grade six.

T-values for the difference between the means in scores of Self-Reliance, Sense of Personal Worth, Feeling of Belonging, Withdrawing Tendencies (freedom from), Nervous Symptoms (freedom from), Social Skills, Anti-Social Tendencies (freedom from), and School Relations are presented in tables on the following pages. Each table identifies the mean score achieved by each grade level in both the multiple-grade and

¹Edwards, loc. cit.

single-grade groups. The t-value will be marked if the level of confidence is at either the 1 or 5 per cent level.

A short discussion will accompany each table. Conclusions which the data appear to support will be presented in this discussion. More comprehensive conclusions will be presented in the summary.

III. SELF-RELIANCE

The social complex which confronts the elementary school student today is oriented towards other-direction rather than self-direction. The standards of the crowd assume predominant value. Self-reliance is overwhelmed by dependence upon the group, and the pressure for conformity threatens to extinguish individuality.

In the multiple-grade class the student experienced relatively little pressure to conform for there was little to which he could conform. In group activities, the student was encouraged to participate to the degree which his particular abilities and interests permitted. If he were interested in an activity being pursued by an older student, he was encouraged to participate in such activity knowing his achievement would not be measured in terms of the older student's performance. A student in the multiple-grade class did not need to experience the frustration which often results when his peers perform better than he. In many instances the student could recognize that better performance was the result of increased age or wider experience. In other experiences the student could evidence the performance of those less skilled than he, and could recognize that, here too, differences in maturity and experience

were in operation. In such a milieu, where differences in performance were the rule rather than the exception, a student could more easily develop confidence in his own abilities and appreciation for the abilities of others. The multiple-grade class thus offered an environmental sanctuary where the individual could be accepted and respected for what he was, where the individual could interact with others without conforming or demanding conformity, and where the individual could develop his individual abilities to the limit of his capacity.

To test this hypothesis, the Self-Reliance sub-test of the California Test of Personality was administered to the students in the multiple-grade and single-grade groups. This test was designed to indicate the individual who could do things independently of others, depend upon himself in various situations, and direct his own activities. Such an individual would be relatively stable in his emotions, and responsible in his behavior. The data from this test are presented in Table X.

TABLE X
MEAN SCORES IN SELF-RELIANCE OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.29	5.76	1.362
4	8.00	6.30	1.471
5	8.67	8.28	.624
6	8.47	7.95	.929

None of the above t-values are significant at either the 1 per cent or the 5 per cent levels of confidence. The mean scores, however, parallel those reported in Chapter IV, in which the multiple-grade group achieved generally consistently higher means. This slight advantage in mean scores may be due to the nature of the school program or due to the youth program sponsored by the church which nearly all the children in the multiple-grade group attend. This church program places great stress on youth participation at all levels.

The data for grade six indicates a regression in self-reliance by members of both the multiple-grade and single-grade groups. This is concomitant with the increasing social awareness of the demands of the group. It appears that the multiple-grade environment was unable to compete with this pressure; the desire to conform and depend upon the group affected its members to a degree only slightly less than that in the single-grade group.

It may be indicated by the data in Table X that children in the primary grades develop relatively greater self-reliance, in the multiple-grade classes. This may be due to their acceptance by older students in various social experiences conducted in the classroom.

From the specific data presented above, however, the multiple-grade class does not enhance the development of self-reliance sufficiently greater than the single-grade class to warrant its adoption where it is not already in operation.

IV. SENSE OF PERSONAL WORTH

Self-reliance is nurtured by experience but is conceived in one's concept of self. An integral aspect of one's self-concept is the sense of personal worth. An individual possesses this sense of personal worth when he feels he is well regarded by others, when he feels that others have faith in his future success, and when he believes he has average or better than average ability. This personality construct is closely related to that of self-reliance in that an individual possessing a sense of being worthy feels capable and reasonably attractive. An underlying assumption on which the hypothesis to be tested in this chapter was based was that a child's sense of personal worth would be increased as he moved in an environment where differences were the normality, where students were accepted for what they were rather than what they could become, and where they could pursue the fulfillment of their individual needs and interests.

Most of the test items in the sub-test of the California Test of Personality reflect the sense of a student's personal worth in terms of that student's reaction to interaction with his peers. The data derived from this test are presented in Table XI.

The data indicate that the multiple-grade group achieved a higher mean score in each of the four grade levels, with the difference between the means at the sixth grade level significant at the 5 per cent level of confidence. It would appear from this data that children at each grade level are developing a more adequate concept of their personal growth.

It is possible that the difference achieved by students at the sixth grade level in the multiple-grade group was due in part to the extent to which teachers of multiple-grade groups depend upon older students to assist them with younger students. That these teachers do utilize student resources is supported by data presented in Chapter VII.

TABLE XI

MEAN SCORES IN SENSE OF PERSONAL WORTH OF MULTIPLE-GRADE AND SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.29	5.95	.865
4	8.90	7.90	.850
5	9.00	8.94	.079
6	9.58	8.21	2.425*

*Significant at the 5 per cent level of confidence.

A tendency on the part of older students to take advantage of younger students within the same group, or to keep attention focused on their own increased maturity may be reflected in the data in Table XI. Recalling the fact that the majority of the multiple-grade students are in units made up of two grade levels, it appears that students in the fourth and sixth grades--the "older" students of each group--have a higher sense of personal worth than do the younger students.

This tends to corroborate the findings of Rehwoldt with his multiple-grade group. The data available from Rehwoldt's study, however, supports only the fact that the multiple-grade group did better than the

single-grade group. The degree of significance was not identified.

Foshay's study, reported in Chapter I, did not test for these items of personality development.

One of the social values of multiple-grade grouping would appear to be the experiences which afford the students opportunities to develop self-respect. The many differences which exist due to the nature of the group enable the student to accept his own differences as well as those of others. The social experiences which occur, in which differences are regarded as assets rather than liabilities, tend to enhance the student's acceptance of the fact that life requires an adjustment to and an acceptance of differences within himself and within others.

V. FEELING OF BELONGING

Closely allied to the sense of personal worth developed by a student is the degree to which that student feels himself to be an accepted part of his group. It was assumed that in those groups where differences are minimized and competition is increased, individuals not able to meet the demands of the group are relegated to a position of non-acceptance or, at best, are regarded with a limited degree of tolerance.

By nature, the multiple-grade group can exploit its differences. It can group the older with the younger, the mature with the immature, the strong with the weak, the fast with the slow, the talented with the untalented. Such experiences provide unusual opportunities for those students possessing the advantage in the situation to develop qualities of leadership while, at the same time, providing those students not

possessing such advantage to benefit from the guidance and assistance of others. The fact that individuals possess both strong and weak points causes this interrelationship to be a dynamic one. In one experience an individual may be the one upon whom the mantle of leadership falls; in another, this same individual may be seeking and receiving the support of others more gifted than he.

For some purposes, a minimizing of differences does occur; but, these occasions are temporary ones. Socialization occurs within a wider range of interrelationships than is ordinarily possible in the single-grade class. It was believed that students in a multiple-grade unit would feel more closely knit to their group than did those in single-grade units.

Three-fourths of the test items used to evaluate the degree to which students had developed a sense of belonging deal primarily with school or closely related situations. The remainder probe the area of family and community relations. The attitudes developed within the school are not separate and distinct from those developed without the school. The quality of early childhood experience is often maintained through the years of later childhood. If the school environment is to foster the continuity of the home environment, then the inclusion of those items relating to family and community do not invalidate the results. An individual with such a concept of his relationship to his world will as a rule get along well with his associates, and usually feels proud of his school. This individual enjoys not only the love of his family but also the well-wishes of his friends, and a cordial relationship with people in

general. Table XII presents the data from the sub-test evaluating these qualities.

TABLE XII
MEAN SCORES IN FEELING OF BELONGING OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.86	6.43	.885
4	9.70	9.20	.551
5	10.17	10.00	.294
6	11.11	10.16	2.230*

*Significant at the 5 per cent level of confidence.

The data above closely parallels the data presented in Table XI. The multiple-grade group achieved slightly higher means at the various grade levels; the difference between the means at the sixth grade level being significant at the 5 per cent level of confidence. It would appear that the older students, acting as appointed or chosen leaders within the group or assisting the teacher of the multiple-grade class in the guidance and instruction of younger students, develop a keener sense of belonging to that group than do the others.

The data in Tables XI and XII may also negate one of the assumptions made at the outset of this study. That assumption was that multiple-grade groups, by removing the artificial grade barriers, tend to minimize the prestige which is associated with "higher" grade placement. In practice, as revealed by data presented in Chapter VII, grade barriers

are not largely removed in the multiple-grade groups. The extent to which these grade lines support the development of a status system within the multiple-grade class may be reflected in the degree to which older students within the multiple-grade group have a stronger feeling of belonging to the group and a higher evaluation of individual worth to the group.

That the multiple-grade group does help the older students in developing a feeling of belonging, or identification with the group, appears to be supported by the data presented. That the bases for the development of this feeling are good or bad is something which warrants further investigation.

VI. FREEDOM FROM WITHDRAWING TENDENCIES

The degree to which early experiences in the life of an individual are reinforced rather than counteracted by those in later life, will determine, to a great extent, the degree to which a sound personality is developed. Despite the many modifying factors, those early experiences which produce definite self- and other- concepts tend to be reinforced as long as the individual's milieu remains relatively constant.

The self-regulatory nature of the personality structure, like any regenerative system, tends to maintain itself. When discontinuity of experience becomes the rule rather than the exception, internal conflicts are engendered which are often met by the individual through attempts to withdraw from that environmental situation producing those conflicts. What may appear to the observer to be discontinuity may not be that but

rather subtle preparations for later life, or a form of continuity. Specific experiential situations have to be seen in context with all other experiences; only then can they be evaluated as items of continuity or discontinuity.

One of the assumptions basic to multiple-grade grouping is that this type of organization tends toward continuity more so than does single-grade grouping. Highly heterogeneous, as is the family group and most of the community groups within which children participate, the multiple-grade group appears to be more life-like.

To test this assumption, the sub-test of the California Test of Personality relating to withdrawing tendencies was administered. The individual who withdraws is one who substitutes the joys of a fantasy world for actual successes in life. Such an individual is usually sensitive, lonely, and given to self-concern. Assuming that lack of success in school, lack of acceptance by an individual's peers, or a variety of other factors operating within the school experience might develop these withdrawal tendencies; and, assuming also that most of these students had had a good home experience, it was hypothesized that if the multiple-grade group were actually fostering a greater degree of continuity between early and later childhood experiences, this fact should be evidenced by a greater freedom from withdrawing tendencies on the part of students within multiple-grade groups. The data secured is presented in Table XIII.

The data presented in Table XIII do not appear to support the assumption that the multiple-grade classroom more effectively fosters con-

tinuity in a child's personality development. The opposite might be closer to fact. Something apparently happens to a child between the third and sixth grade levels in the multiple-grade group. It is possible that the demands of grade structure are more keenly felt in the intermediate grades than in the primary grades. The resultant status structure, as seems to be implied by data in Tables XI and XII, may operate as acutely within the multiple-grade group as sub-groups operate within a single-grade group.

TABLE XIII

MEAN SCORES IN FREEDOM FROM WITHDRAWING TENDENCIES OF MULTIPLE-GRADE AND SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.48	5.57	2.087*
4	7.70	8.82	.336
5	8.72	8.50	.272
6	8.68	8.00	.810

*Significant at the 5 per cent level of confidence.

The difference between the means of the scores achieved at the third grade level is statistically significant at the 5 per cent level. The differences at the other grade levels are not significant at this level of confidence. At the fourth grade level, the single-grade group shows a slight gain, though with the limited number of degrees of freedom in this group the difference is very likely the result of chance.

From the data presented in the preceding table, it would appear that neither the multiple-grade group nor the single-grade group introduces sufficient discontinuity of personality development to foster serious withdrawing tendencies. In both groups, factors do operate toward this end more intensely at the higher grade levels than at the lower grade levels. Multiple-grade grouping, however, appears to offer no distinct advantage in this facet of personality development.

VII. FREEDOM FROM NERVOUS SYMPTOMS

One of the first obvious indications of maladjustment in personality development is the manifestation of nervous symptoms among which are loss of appetite, frequent eye strain, inability to sleep, or a tendency to be chronically tired. Individuals manifesting such symptoms may be exhibiting physical expressions of emotional conflicts. It was assumed, in this study, that the total personality patterns of students in multiple-grade groups would exhibit less nervous symptoms than those of students in single-grade groups. This assumption was in harmony with other assumptions underlying the basic hypothesis that students in multiple-grade units would develop more wholesome personalities than similar students in single-grade groups.

The test items deal primarily with nervous symptoms that are physical in nature. In a more complete evaluation, emotional symptoms should also be considered. Some of these emotional symptoms are actually alluded to in previous sub-tests, though little attention is given them as such.

The data secured from the California Test of Personality is presented in Table XIV. It will be observed that the difference between the means is only slight, and in no instance is the difference of statistical significance within the 5 per cent level of confidence.

TABLE XIV

MEAN SCORES IN FREEDOM FROM NERVOUS SYMPTOMS OF MULTIPLE-GRADE AND SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.19	5.10	2.060
4	8.20	8.20	- - -
5	8.94	8.72	.285
6	9.68	9.00	1.056

The results of this test are highly comparable to the results presented in Table XIII. Primary children in the multiple-grade group appear to develop, to a slight degree, some of the nervous symptoms identified in this sub-test. Whether these symptoms are manifested by the same individuals developing withdrawal tendencies is not known. Some factor, in the multiple-grade group, is apparently mitigating wholesome personality development; though the extent to which this is being effected is statistically insignificant. The assumption that multiple-grade grouping more adequately fosters the development of a wholesome personality appears to be challenged by this data as well as that presented in preceding tables.

VIII. SOCIAL SKILLS

If personality is defined as the individual's conception of himself in relation to his environment, the well-balanced personality would be one in which those concepts bear a realistic relation to physical and social facts. If an individual's self-concept is normal, that individual perceives realistically his own strong and weak points, his abilities and handicaps. Such an individual's orientation to society will remain balanced as he correctly perceives the positive and negative valences.

Personality and society are virtually mirror images of each other. An individual's concept of and adaptation to his society is determined largely by his concept of himself, and this self-concept is, in the main, a mirror of his culture.

The extent to which the school shapes an individual's self-concept will determine to a proportionate degree the adaptation which that individual makes to the school. Further, the extent to which the school is an agency and a model of society will determine to a proportionate degree the adaptation which that individual makes to his society.

An assumption, basic to the hypothesis being tested, was that the multiple-grade group more adequately reflects the society which it serves. This milieu would, in turn, provide the most ideal situations through which the necessary social skills could be learned and developed.

To test this hypothesis, it was deemed necessary to evaluate not only the social skills required by society, but also the degree to which

the personalities in question were free from anti-social tendencies. A socially skillful individual is one who shows a liking for people; who will inconvenience himself to be of assistance to others; who is diplomatic in his dealings with both friends and strangers; and, who subordinates his egoistic tendencies in favor of interest in the problems and activities of his associates. Such an individual will be free from those personality constructs which manifest themselves through bullying, frequent quarrelling, disobedience, vandalism, and the attempt to achieve satisfactions in ways that are damaging and unfair to others. A third phase of social development was related to the individual's attitude toward his immediate community--the school. Data for the analysis of these three phases were secured from the California Test of Personality. Data relevant to social skills are presented in Table XV.

TABLE XV
MEAN SCORES IN SOCIAL SKILLS OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.57	5.38	2.668*
4	9.70	8.80	1.197
5	9.72	9.83	.214
6	10.84	9.89	1.987

*Significant at the 2 per cent level of confidence.

The difference between the means in social skills development at the third grade level is statistically significant at the 2 per cent level

of confidence. The implication would be that students in the multiple-grade group have developed further in social skills than comparable students in the single-grade group. Such an implication would be in harmony with the conclusions reached by Foshay and Rehwoldt in their respective studies, reported in Chapter I.

A careful study of the data presented in Table XV would lead to a questioning of this implication. While the multiple-grade group tends to show a larger mean score in social skill development, the total gain achieved by both groups is practically the same. The data might suggest that students in the multiple-grade group, either by virtue of their membership in such a group or by virtue of other factors, had developed a higher degree of social proficiency before entering school, or at least by the third grade level. It is considered a limitation, at this point, that this study did not include children in the first and second grades.

For some undetermined reason, the children in the multiple-grade class do have a slightly greater degree of proficiency in social skills. This degree, however, is maintained rather than increased. It would appear logical to assume that if the multiple-grade organization were actually enhancing the development of these skills, the difference between the means would increase as the student progressed through school. Such a fact is not indicated by the data.

The suspicion that the multiple-grade groups used for this study are actually being conducted as several distinct grade levels within one room seems to be increasingly supported by the data presented in these pages.

IX. FREEDOM FROM ANTI-SOCIAL TENDENCIES

A theoretical or functional knowledge of social skills does not, in itself, imply an absence of anti-social tendencies. Fully versed in the mores of his culture, an individual's personality structure might be so organized as to elicit anti-social responses despite a knowledge of what that society expects and demands.

Common manifestations of these tendencies are seen in acts of aggressiveness, bullying, retaliation, quarreling, temper tantrums, and continued acts of annoyance. An individual manifesting these characteristics may be considered lacking in social skills. The nature of the test items in the California Test of Personality are not so constructed that a negative response in the Social Skills sub-test parallels an opposite response in the Anti-Social Tendencies sub-test. Data from the Anti-Social Tendencies sub-test are presented in Table XVI.

TABLE XVI

MEAN SCORES IN FREEDOM FROM ANTI-SOCIAL TENDENCIES OF MULTIPLE-GRADE AND SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.62	6.00	1.140
4	10.01	8.40	2.146
5	9.94	9.44	.689
6	10.58	9.05	3.262*

*Significant at the 1 per cent level of confidence.

In this area of freedom from anti-social tendencies is found the highest level of significance of difference between the means achieved in any sub-test used in this study. More dramatic changes between grade levels are also apparent in this area. The multiple-grade group has a slightly higher mean score at the third grade level. A sharp rise is evident in the multiple-grade group between the third and fourth grade levels with respective means of 6.62 and 10.01 as compared with the respective means of the single-grade group of 6.05 and 8.40. This rise continues throughout the four grade levels in the multiple-grade group but regresses slightly at the sixth grade level in the single-grade group. This regression may be due in part to the increased factors which generate competition and rivalry at the sixth grade level. Such factors would operate within the multiple-grade also; but, these are possibly mitigated by a variable which was unable to be controlled in this test.

The members of the multiple-grade group belonged, largely, to the same religious group. This group gives considerable attention to the repression of anti-social actions. This cultural determinant may be the greatest single contributing factor to the degree to which anti-social actions are absent from the multiple-grade group.

X. SCHOOL RELATIONS

The society which confronts an individual is made up of several communities. Each of these communities possesses its own distinctive characteristics. The amount of consistency or inconsistency which exists between these communities governs, to a relative degree, the wholesome-

ness or lack of wholesomeness of the developing personality of an individual. This is one of the underlying principles upon which the organization of the Arthur W. Spalding School was founded.

Rehwoldt, in the study reported in Chapter I, pointed out that subjective reports and observations indicated the multiple-grade group developed a better attitude toward their school--one of these communities. If the multiple-grade group being evaluated in this study were actually fostering a greater degree of continuity in the personality development of the individual, than the single-grade group were doing, the fact should be supported by data. Such data were secured from one of the sub-tests in the California Test of Personality. The data is presented in Table XVII.

TABLE XVII
MEAN SCORES IN SCHOOL RELATIONS OF MULTIPLE-GRADE AND
SINGLE-GRADE GROUPS, BY GRADE PLACEMENT

Grade Level	Multiple-grade Group	Single-grade Group	t Value
3	6.81	6.05	1.487
4	9.80	8.00	1.891
5	9.89	9.89	- - -
6	10.16	9.37	1.100

The data above indicates a fairly uniform degree in attitudes held by students in both the multiple-grade and single-grade groups toward their schools. As has been the pattern in previous sub-tests, the multiple-grade group tends to have a slightly better attitude toward

school, though the difference lacks statistical significance within the 5 per cent level imposed in this study.

A significant fact may be seen in the point that regardless of the criticisms to be found about either multiple-grade or single-grade grouping, the students, in general, enjoy their school experience. A number of theories could be presented to suggest that children do not like and will not adapt to multiple-grade grouping. Data presented in this chapter as well as those in Chapters VI and VII, indicate otherwise.

XI. SUMMARY

Three of the hypotheses made at the outset of this study have been tested and evaluated in this chapter. These hypotheses stated that the personality development of children in multiple-grade groups would be enhanced, that their social development would be greater, and that they would develop better attitudes toward school.

To test these hypotheses, the California Test of Personality was employed. Those sub-tests bearing most directly upon the hypotheses were selected and administered. T-values on the difference between the mean scores in the various areas were calculated. These scores with the t-values were presented in tables throughout the chapter.

The data presented in these tables would indicate that the hypotheses, as related to the specific multiple-grade group utilized in this study, need to be modified.

The personality development of children within the multiple-grade group did not exceed to the point of a statistical significance of

difference from that of children in the single-grade group. Support for multiple-grade grouping on this basis is lacking.

The same modification is necessary regarding the social development of children within the multiple-grade group. Though theoretically possible, such development within the multiple-grade group used in this study did not reach a point of significant difference from that achieved by students in single-grade groups.

The third hypothesis: that children in multiple-grade groups will develop better attitudes toward school, was not supported by the data presented in this study. Arguments for the adoption of multiple-grade grouping based upon any of these hypotheses are unwarranted from the data presented in the preceding pages.

Not to be overlooked, however, is the fact that almost without exception the multiple-grade group achieved higher mean scores than did the single-grade group. While few of these differences were statistically significant, the fact that there ~~was~~ consistently higher mean scores does suggest that multiple-grade grouping may have unrealized potential. The reasons why those potentials were not realized in this multiple-grade group are probably revealed in the data presented in the following chapters.

Another fact to be considered in the light of the preceding data is the unwarranted criticisms of multiple-grade grouping. While the data do not support the contention that multiple-grade grouping is superior to single-grade grouping, they do support the fact that it is at least equal. This conclusion may not induce school administrators to change from single-grade to multiple-grade grouping, but it might cause admin-

istrators contemplating the opposite to reconsider. Unless the change from multiple-grade grouping to single-grade grouping is effected to meet criteria other than that referred to in this chapter, the wisdom of such conversion may be questioned.

CHAPTER VI

PARENTAL ATTITUDES AND OPINIONS

I. INTRODUCTION

Educators and conscientious parents are alarmed by community conflicts over today's educational programs. It is clear to some that oneness of thinking about children and about the education those children need is lacking. Many factors in an increasingly complex society have tended to pull homes and schools away from each other, and this is a time when the new demands on education have made cooperation extremely vital.

To the extent that the school is an agency of society, it must work with that society in developing its program. Some schools have been at fault in developing their curriculum in isolation. The many media for communication between the school and the society it serves makes such isolation untenable.

The multiple-grade program of the Arthur W. Spalding School has been in operation for more than twenty-five years. Effective relations have existed between the school and its patrons through its parent-teacher organization, and the close contact maintained with the parents by the school staff. A minimum amount of criticism of the multiple-grade program, per se, is rendered.

It is possible that the scarcity of this criticism was due as much to the reticence of parents to criticize and the lack of opportunity

to criticize as to the degree with which the multiple-grade program was accepted. Another factor for consideration is the lack of any alternative to such a program in the community in which the Arthur W. Spalding School is located.

To test this hypothesis, an evaluative instrument was prepared to give the patrons of the school an opportunity to express their opinions and yet retain anonymity. The data secured from this instrument is reported below.

II. THE EVALUATIVE INSTRUMENT

Five parents, active in the P. T. A. of the Arthur W. Spalding School, were invited to form a group for the purpose of submitting opinions which they believed patrons would hold regarding the multiple-grade program. The statements which they submitted were combined with those from several other sources. The statements were then refined into a two-page questionnaire. A further refinement at the University of Tennessee reduced these items to seventeen in number, and the size of the questionnaire to one page (see Appendix VI.).

When the parents came to register their children in the Arthur W. Spalding School, those with children entering multiple-grade classes were given the invitation to complete the questionnaire. More than one hundred parents returned the questionnaires; only ninety, however, were used in the data reported on the following pages. A number of questionnaires were only partially completed. The high incidence of no opinion of these questionnaires made them unsuitable for this study.

All parents with children in the multiple-grade group were requested to complete this questionnaire. It would have been more significant, probably, had the opinions of parents from both groups been ascertained. Due to the extreme difficulties in getting questionnaires into the hands of the parents of the children from the single-grade groups, it was decided to limit the evaluation to parents of children in the multiple-grade school.

The significance of replies from parents of children in the single-grade group may be questioned. It was believed that had a questionnaire been submitted to this group, it would have had to have been necessary to give an extensive explanation of the nature of the multiple-grade group. Most of the patrons of the multiple-grade school, however, were acquainted with the nature and operation of multiple-grade groups.

That some significance could have been attached to the opinions of parents of children in single-grade groups cannot be denied. In the light of arguments presented in Chapter II of this study, regarding the false assumptions which many people have made regarding multiple-grade grouping, it would have been of some significance to determine to what degree these assumptions are held by individuals not familiar with such grouping.

Of the individuals completing the questionnaire, one-third had not had children in multiple-grade groups previously. This number included those new to the community, whose children were transferring from single-grade schools, and those whose children were entering school for the first time.

Parents in both groups represent a cross section of the total population. Respondee included college faculty, businessmen, professional people, college students, salesmen, farmers, skilled and unskilled laborers, housewives, and retired individuals. One factor setting this sampling of parents apart from the total population is that approximately two-thirds of these parents have had some college training. This is higher than the national average.

The data presented in the following pages are based on a comparison between those parents whose children had been in multiple-grade groups before and those parents whose children had never experienced a multiple-grade group.

III. THE OPINIONS

The questionnaire consisted of seventeen questions which elicited a Yes-No answer. Each question was constructed in an effort to minimize the suggestion of any "right" answer. No attempt was made to inform parents that their answers would be compared with those of others, or that they would be grouped for comparison. The grouping was accomplished by the first question in the instrument: "Is this the first time your children have ever been in a multiple-grade class?" To this question, thirty parents signified "Yes"; sixty signified "No." The remaining questions are listed below with an accompanying analysis. An overall view of the results may be obtained from Table XVIII.

Question #2. Do you prefer multiple-grade classes for your
- child?

TABLE XVIII
OPINIONS ABOUT MULTIPLE-GRADE GROUPING
EXPRESSED BY NINETY PARENTS

Respondees Answering Yes	Respondees Answering No	Questions
30	60	1. Is this the first time your children have ever been in a multiple-grade class?
23	67	2. Do you prefer multiple-grade classes for your children?
79	11	3. Do you think it is a good idea to have children continue with the same teacher more than one year?
31	59	4. Do you think that having several grades in one room gives the <u>slower</u> learner a better chance to develop?
51	39	5. Do you think that having several grades in one room gives the <u>faster</u> learner a better chance to develop?
24	66	6. Do you think it is good to have older and younger students in the same room?
84	6	7. Do you think that the pupils with whom your child is grouped at school have any significant effect upon his learning?
84	6	8. Do you think it is a good idea to teach skills to children in as small groups as possible?
75	15	9. Do you think your child will make as much progress in this multiple-grade organization as is possible?
78	12	10. Do you think that pupils in a classroom should be about the same age?

TABLE XVIII (CONTINUED)

Respondees Answering Yes	Respondees Answering No	Questions
87	3	11. Do your children like to go to school?
86	4	12. Do you think your child gets along well with the other children in his room?
48	42	13. Do you think your child (will show) (has shown) more progress in the 3 R's than he would have in a single-grade program?
55-	35	14. Do you think your child (will show) (has shown) more progress in social development than he would have in a single-grade program?
14	76	15. Do you think it is better for children to have a different teacher each year?
74	16	16. Do you think the school is providing adequately for the differences of individual children?
45	45	17. Do you feel that teachers in multiple-grade classrooms are so busy with the "extra" grades that they are unable to help children as much as is needed?

The responses to this question were nearly a complete reversal of those to Question 1, with more than two-thirds of the respondents signifying that they do not prefer multiple-grade grouping. This must be evaluated in the light that approximately half of these respondents were individuals whose children had not been in multiple-grade groups composed of more than two grades. It is not to be presumed that these negative responses came entirely from parents whose children had been in multiple-grade groups previously. Experience has shown that parents unfamiliar with the program are initially apprehensive of such grouping. The following questions may reveal the bases for the dislike of the program by those who are familiar with its nature.

Question #3. Do you think it is a good idea to have children continue with the same teacher more than one year?

Seventy-nine parents indicated that they believed it was better for children to have the same teacher more than one year. Compared with the sixty-seven who indicated that they did not prefer multiple-grade classes for their children, this might suggest that they would prefer to have the teacher progress from grade to grade with their children, or to have their children not progress. The latter appears highly illogical.

Here is posed a dilemma which parents would not like to see solved by multiple-grade grouping. Recognizing, possibly, that the better acquainted a teacher is with a student, the greater degree to which that teacher can meet the needs of a particular child, these parents prefer that the association between a particular teacher and child be maintained longer than is done under the traditional grade placement system. It

is possible that the non-graded type of organization could satisfy both desires as expressed in this questionnaire.

Question #4. Do you think that having several grades in one room gives the slower learner a better chance to develop?

Approximately two-thirds of the respondents indicated that they believed the slower learner was paying a penalty in the multiple-grade class. Only thirty-one indicated that they believed a slower learner would profit from the multiple-grade grouping. The responses to Question 17 of the questionnaire would suggest that many of the respondents were not consistent in their opinions. In that question a larger number indicated that they felt the multiple-grade units were providing adequately for the differences of individual children. A study of Question 13 and 14, however, would indicate that this opinion is held more in terms of social needs than academic needs.

Question #5. Do you think that having several grades in one room gives the faster learner a better chance to develop?

The responses to this question are nearly a direct reversal to those of the preceding question, indicating that a majority of the parents believe that the intellectually gifted child can profit from the experience which a multiple-grade group offers, while the slower child is penalized by such an experience. There appears to be, throughout the responses to this questionnaire, a prevailing attitude that academic development is the major factor in the education of children.

Question #6. Do you think that it is good to have older and younger children in the same room?

An inherent weakness in this question is the fact that no specific limits are ascribed to the age spread referred to. It is impossible to determine how much spread each respondent had in mind when stating his opinion. It is easily recognized that any given classroom is made up of older and younger children. It is possible that the sixty-six individuals responding "No" to this question are thinking in terms of one or more years' difference from the ages of their own children. This possibility is confirmed by the responses to Question 10 when an even larger number of individuals indicated they believed children in a given classroom should be about the same age.

Some of the reasons for this opinion may be found in a few of the comments which tend to generalize about the concept of a lack of rapport between older and younger students. Such comments as: "Younger children are afraid of older children," "Older children are not patient with smaller students," "Smaller children get pushed aside by older ones," "Older children teach bad habits to younger children" indicate a concern about the social relationships which exist between children of different ages.

One respondent who signified approval for older and younger children being grouped together touched upon a significant aspect in her comment; "Everywhere else in life they associate with others of different ages, I think it's good." One of the arguments favoring the multiple-grade organization is that it does more favorably compare with real-life social situations.

It is possible that parental reaction against the grouping of children of various ages together comes as a result of the complaints of the children. Children are not always the most accurate reporters of a classroom or playground situation. It is possible, justly or unjustly, that sufficient reports of poor social relations have colored the parents' attitude toward such grouping. It is equally possible that these expressed opinions are the results of parental bias unsubstantiated by any such reports. The opinions expressed in answer to Question 11 would indicate the latter.

Question #7. Do you think that the pupils with whom your child is grouped at school have any significant effect upon his learning?

Eighty-four respondees acknowledged agreement with this concept. No discrimination was made as to positive or negative effects. The point established is that parents generally agree that the social interaction which occurs within a classroom has an effect upon a child's learning. It is assumed that these parents believe a good social rapport will enhance the learning of a child while a poor social rapport will negate such learning. This suggests parental acceptance of a generally established psychological concept that the happy child will learn better than the unhappy child... If the parents genuinely subscribe to this principle, and their responses to subsequent questions are valid, it raises serious objections as to the validity of other answers.

Question #8. Do you think it is a good idea to teach skills to children in as small groups as possible?

The responses to this question would indicate widespread acceptance among parents of a sound educational principle. The comment made by one of the eighty-four answering "Yes" to this question would challenge such an assertion. This comment was, simply, "What do you mean by skills?" It is possible that parents entertain the notion that anything done in school is done best in a small group. While this may apply to the teaching of certain skills, it would not necessarily apply to every experience in the curriculum. If many parents are not cognizant of what is meant by "skills", the responses to this question lose much significance. It is nevertheless, an expression of opinion which molds parental support or nonsupport of a school program, whether that opinion is based on fact or fancy.

Question #9. Do you think your child will make as much progress in this multiple-grade organization as is possible?

From the seventy-five "Yes" responses to this question, compared to the answers to Questions 4 and 5, it may be that most parents assume their children to be faster rather than slower. Answers to the earlier questions indicated fairly uniform conviction that the faster children are at an advantage while the slower children are at a disadvantage in a multiple-grade classroom. Responses to this question, at the same time, indicate that parents assume their own child will make as much progress as is possible, even in the multiple-grade class. This, in light of the fact that many of these parents have had children in multiple-grade classes previously, would seem to indicate approval of the fact of multiple-grade grouping while indicating disapproval of the theory of such grouping.

Question #10. Do you think that pupils in a classroom should be about the same age?

The results of this question have already been referred to in the discussion under Question 6. Seventy-eight of the ninety parents from whom data were secured, indicated their conviction that children should be homogeneous in their ages, within a given classroom. It was not possible to ascertain the extent to which cultural bias molded the responses to this question; but, these responses coupled with those to Question #2 would indicate that most of the patrons of the Arthur W. Spalding School would prefer a single-grade experience for their children.

Question #11. Do your children like to go to school?

In the light of the responses to this question, it is considered a weakness of this study that the opinions of students from multiple-grade classes were not polled. The largest percentage of "Yes" responses were received in reply to this question. Regardless of the opinions expressed by parents; regardless of their fears and qualms; regardless of their prejudices and biases; their children, apparently, are enjoying the experiences of a multiple-grade group. It must be admitted, though, that for some students no other types of experience are known. For many, both types of grouping have been experienced. It is considered significant that most of the parents indicated their children enjoyed school.

Many factors are involved in a child's happiness or lack of happiness in school. Classroom organization is one of these. In no parental comment, however, was there indication that the child was

displeased with the multiple-grade organization. In one of the three instances of negative responses, the parent did refer to the fact that the child "would prefer another teacher." This, however, has happened in single-grade organizations.

Question #12. Do you think your child gets along well with the other children in his room?

Could it be possible that each parent interpreted this as referring specifically to his own child's attitude toward his peers rather than in terms of interaction between his child and others. When one considers the attitude of the parents as expressed about a wide range of ages within a given classroom, and ponders the reasons for those objections as identified in added comments, one questions the validity of the statements made by eight-six of the respondees that their children do get along well with the other children in the classroom. The opinions expressed here would seem to reinforce the observation made under Question 9: parents accept the fact that their children do well in the multiple-grade group but do not prefer the idea of such grouping.

Question #13. Do you think your child (will show) (has shown) more progress in the 3 R's than he would have in a single-grade program?

Opinions come somewhat closer to being evenly divided on this point with forty-eight signifying "Yes" and forty-two signifying "No". So few eliminated the wording that did not apply to them, that it was impossible to interpret whether the bulk of the responses signified

faith in the potential of the multiple-grade group or satisfaction with past accomplishments. This discrimination would have enhanced the significance of the question.

The extent to which the students in the multiple-grade and the single-grade groups did differ in academic achievement, as measured by the Stanford tests, has already been discussed. The fact that parents are of the opinion that their children have achieved satisfactorily in academic areas is due in part to the parent-teacher conferences conducted regularly in the Arthur W. Spalding School. Parents are given a continuous appraisal of their children's progress in terms of both standardized and teacher evaluations.

Question #14. Do you think your child (will show) (has shown) more progress in social development than he would have in a single-grade program?

Opinions are somewhat more decided in terms of social progress than academic progress as represented in responses to the two previous questions. Fifty-five respondents indicated their belief that multiple-grade grouping enhanced the child's social progress. The lack of discrimination which characterized the answers to Question #13, exists in the answers to this question.

The extent to which the evaluative data used in this study support the opinions of parents expressed in this question have already been discussed in Chapter V.

Question #15. Do you think it is better for children to have a different teacher?

This question was inserted as a deliberate check question. It will be recognized as the antithesis to Question #3. Three respondees, apparently, did not make this recognition for seventy-six indicated they thought it was not better for children to have a different teacher each year while seventy-nine, in response to Question #3, indicated they thought it was better to have children continue with the same teacher more than one year.

The percentage of error may not be considered large enough to invalidate the bulk of the responses to the questionnaire. Basically, the response is consistent with that of the antithetical statement.

Question #16. Do you think the school is providing adequately for the difference of individual children?

There was rather strong convictions, expressed earlier, that the multiple-grade organization does not provide enough allowance for the slow learner. This is, possibly, reflected in the sixteen negative responses to this question. While the term "school" is used in this question rather than "multiple-grade class", it should be remembered that the entire school from grades one through six is organized on a multiple-grade basis. Any suggestion that the school is not meeting the needs of the child is, at the same time, an evaluation of the multiple-grade classes.

Question #17. Do you feel that teachers in multiple-grade class rooms are so busy with the "extra" grades that they are unable to help children as much as needed?

In response to this question, the respondees are evenly divided in their opinion. This may be one way of stating that there is "no opinion." So great in the mind of the public is the picture of the overburdened teacher in the overcrowded classroom, that few parents believe anything else exists.

In none of the multiple-grade classrooms were there more than thirty students. In that classroom where the organization entailed four grade levels rather than two, the enrollment was held at twenty. Such conditions are not true of every multiple-grade classroom in other schools, however.

IV. SUMMARY

This chapter was designed to present data testing the hypothesis that parents who are acquainted with the multiple-grade program recognize the advantages such a program offers. This hypothesis is stated with the assumption that those parents who recognize the advantages of multiple-grade grouping will desire such advantages for their own children.

To secure the desired data, it was necessary to construct an evaluative instrument. This instrument consisted of seventeen questions relative to multiple-grade grouping. Each question was designed to elicit a "Yes" or "No" response. These responses were tabulated and have been presented in Table XVIII.

The data presented on the preceding pages would indicate that those parents polled do not care for the multiple-grade type of organization. This would nullify the hypothesis being tested. While the

parents polled indicate agreement with some of the principles on which multiple-grade grouping is founded, and they indicate that they are pleased with the results of their children's experiences, they remain apprehensive. The extent to which this is a reflection of biases based on unfounded assumptions is not known. The fact that such prejudice exists, even among those who have been acquainted with the program from some time, cannot be ignored. It forms a foundation upon which a more successful public relations program must be built by multiple-grade organizations.

CHAPTER VII

OPINIONS ABOUT MULTIPLE-GRADE GROUPING EXPRESSED

BY ONE HUNDRED TEACHERS AND ADMINISTRATORS

I. INTRODUCTION

Key personnel in the system that society has designed for its own propagation as well as its continual development, are the teachers who work directly with the resources of that system and the administrators who guide the development and refinement of that system. Chapter VI explored the opinions and attitudes of parents toward the type of school organization known as multiple-grade grouping. From these opinions and attitudes stem the actions that parents take in supporting or withholding support from multiple-grade grouping or any other phase of the total educational program.

This chapter seeks to explore the opinions and attitudes held by teachers and administrators who have been involved in the multiple-grade type of organization. An analysis of the opinions held by those who live and work in this system day by day, some for many years, may provide a significant insight into the real potential of multiple-grade grouping. Some of the persons whose opinions are reported in this chapter have been trained to work with children in multiple-grade groups. Others have entered into this experience without formal preparation. Some have had no experience other than multiple-grade teaching; others a balanced proportion of this type of experience with that in the traditional graded classroom.

Some of the administrators polled have been teaching-principals; others, only full-time administrators. One group of administrators has had administrative experience only in small schools with multiple-grade classes. All the personnel, however, had had some experience with the multiple-grade type of class organization. Their opinions are opinions based on experience. To secure these opinions, an instrument was designed for that specific purpose.

II. THE EVALUATIVE INSTRUMENT

A number of statements were prepared relative to multiple-grade grouping. All statements were phrased positively about the multiple-grade program, though an attempt was made to construct them in such a manner that they did not elicit a "right" reaction. A five-point rating scale was included whereby the respondent could indicate his reaction from "strongly agree" to "strongly disagree".

After refinement of the original statements, the instrument contained thirty-two evaluations of the multiple-grade program. Due to the fact that many individuals to be polled would be teaching-administrators, it was decided to use a combined questionnaire. Provision was made on the rating scale for "no opinion" where necessary.

The questionnaire was submitted to teachers and administrators in the states of Alabama, Florida, Georgia, Mississippi, and Tennessee. These states comprise the geographical area served by Southern Missionary College. It was from the laboratory school of this college that the multiple-grade group was selected. The fact that the teachers and administrators from

multiple-grade schools in these states convened near Atlanta, Georgia for professional meetings facilitated the distribution and collection of the questionnaires. Those questionnaires that were returned were grouped according to four classifications. The purpose for this sub-grouping was to compare differences in attitude which might be manifested by individuals with differences in experience. These classifications are used throughout subsequent pages of this study in the presentation of the data. The classifications were:

1. Class A. These were individuals who had taught in multiple-grade groups only. Twenty-five of these individuals returned the questionnaire; these twenty-five had had an average of nine years' teaching experience.
2. Class B. This group was made up of individuals who had had teaching experience in both multiple-grade and single-grade groups. Sixty-two individuals in this category returned the questionnaires; only twenty-five, however, were used for this study. This limitation was effected for two reasons: (1) An attempt was made to equalize the size of each of the four groups to make comparisons easier to comprehend, and (2) Many of the individuals in this group were teaching-administrators. This group was designed to include only those who were teaching exclusively. The twenty-five teachers included in this group had had an average of six years' experience in single-grade groups and eleven years' experience with multiple-grade groups.

3. Class C. This was the group of administrators who had been principals in multiple-grade schools only. Very few full-time principals in this category returned questionnaires. To make a full complement of twenty-five, it was necessary to use questionnaires submitted by teaching-principals already mentioned in Class B. However, only those who had been teaching-principals in multiple-grade schools exclusively were included. The individuals in this group had had an average of eleven years administrative experience.
4. Class D. The final group was those administrators who had had administrative experience with both single-grade and multiple-grade group. To reach a full complement in this category, it was necessary to send questionnaires outside the areas mentioned above. The data presented below contain responses from individuals in Massachusetts, Connecticut, New York, Michigan, California, and Texas. Administrators in this category had had an average of fourteen years experience.

In addition to the thirty-two statements which were designed to elicit the individuals' reactions, space was provided for teachers to state what, in their opinion was the greatest problem in working with multiple-grade groups, and what were the greatest benefits of working with such groups. Administrators were asked to identify what they thought to be the greatest problem of operating a school in which multiple-grade grouping was practiced, and the greatest advantage which multiple-grade grouping had over single-grade grouping. The results of this questionnaire are

presented below. The complete questionnaire is presented in Appendix VII.

III. THE OPINIONS

Each of the thirty-two evaluative statements are listed below, accompanied by a percentage breakdown of responses by classes. These classes have been identified above. The five-point scale ranges from SA (strongly agree) through A (agree), O (no opinion) and D (disagree) to SD (strongly disagree).

1. Administrative problems are no greater with multiple-grade classes than with regular classes.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	32	36	28	0
Class B	24	32	12	28	4
Class C	12	60	12	12	4
Class D	12	44	20	20	4

The administrators whose experience has been limited to multiple-grade groups only are a little more willing to concede that their administrative loads are just as great, or no greater than those whose roles are administrators of single-grade groups. The teachers and the administrators, however, who have had experience with both groups indicate their belief that it is somewhat more difficult to administrate a multiple-grade organization. Few individuals bothered to comment on the problems they felt were peculiar to multiple-grade grouping; but,

one administrator stated his problem most succinctly: "PARENTS."

2. Students give no evidence of hesitancy about becoming members of multiple-grade classes.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	8	76	8	8	0
Class B	4	56	16	24	0
Class C	4	64	8	24	0
Class D	8	64	12	16	0

Agreement with this statement is fairly uniform among the four groups represented. This would appear to lend professional support to the opinions of the parents that the children, themselves, do not mind being grouped in a multiple-grade situation. More concern over the child's acceptance or lack of acceptance of himself or others seems to be felt by the parents than by the students. The degree to which this concern is reflected by the student at different stages of his social development might be worthy of investigation. It may be safe to assume that there are few disciplinary problems arising from a child's dissatisfaction with a multiple-grade environment.

3. Most parents are reluctant about their children being placed in a multiple-grade class.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	0	24	12	60	4
Class B	0	52	12	32	4
Class C	0	40	0	52	8
Class D	0	40	8	48	4

Data compiled in Chapter VI indicated that parents polled in this study did not desire a multiple-grade experience for their children. Though the opinions of the teachers and administrators expressed above are about evenly divided between agreement and disagreement, the extent to which these professional people are not aware of parental feelings might serve to give direction to administrative procedure. Evidently, the majority of parents have been conditioned to accept what the schools serve. While professional leadership is to be respected, the day when the countercheck of parental opinion ceases to operate will mark the apogee of educational progress.

4. Parents identify this type of grouping with the popular conception of inferior rural education.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	4	32	12	48	4
Class B	0	40	12	44	4
Class C	4	36	4	48	8
Class D	4	36	8	48	4

This conception is apparently not as widely accepted as the authors of the questionnaire assumed. It is possible that the parents referred to by the respondents above were those parents already acquainted with the nature and objectives of such a type of organization. It is also possible that this conception is not the barrier to public acceptance of the multiple-grade program in most places.

5. Once parents understand the advantages of multiple-grade grouping, they are quite willing for their children to be placed in such classes.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	80	16	0	0
Class B	0	72	24	4	0
Class C	4	80	12	4	0
Class D	4	76	16	4	0

The responses to this statement combined with the responses of the preceding question should fairly adequately dispel any fears of negative public reaction to the multiple-grade program. The opinions expressed above might serve to challenge the opinions of the parents expressed earlier, or might serve to question whether those parents had ever been adequately appraised of the purposes and program in the multiple-grade classes.

6. Most parents are pleased with their children's experiences and development in a multiple-grade class.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	72	12	12	0
Class B	4	56	24	16	0
Class C	4	68	8	20	0
Class D	4	68	12	16	0

The data above would indicate professional awareness of parental satisfaction with the overall development of their children in the multiple-grade environment. Such awareness is either the result of gross presumption on the part of school personnel or an effective home-school relationship. It is too easy, though, to interpret the lack of criticism as the sound of approbation. This, unfortunately, is not always the case. Parental responses as tabulated in Chapter VI indicated that there was greater satisfaction with the social development of the children than with the academic development. Lack of discrimination in this question makes it impossible to evaluate this factor in the responses above.

7. Assignment of students to classes is much easier in a multiple-grade school since no special distinction need be made as to proper grade level; students can be placed in a room according to their abilities.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	0	48	20	16	16
Class B	4	36	4	44	12
Class C	4	40	4	52	0
Class D	4	36	16	36	8

The responses of the latter three classes tend to indicate this as one of the administrative problems relating to multiple-grade grouping. The fairly even distribution of answers may reflect a difference of conditions in various schools. In those small schools where only one or two rooms are available, the problem of assigning students becomes relatively routine. In larger schools, where a number of similar multiple-grade units are in operation, the problem becomes a little more difficult and greater selectivity must be exercised. In those schools where both multiple-grade and single-grade units are operating concurrently, the problem is compounded. It is not difficult to make a choice when there is only one selection.

8. Multiple-grade teaching is not more difficult than single-grade teaching since both types of organization require further grouping.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	32	16	24	24
Class B	4	36	4	44	12
Class C	4	40	4	52	0
Class D	4	36	16	36	8

Opinions in this area appear to be slanted toward disagreement. Good teaching in any area requires sub-grouping for certain activities. It is possible that the respondees above feel overwhelmed at times because much more of their sub-grouping is done within the confines of grade boundaries. This factor is probed in an ensuing statement.

9. After teachers have become accustomed to multiple-grade classes, they prefer this type of class organization above single-grade classes.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	4	16	32	44	4
Class B	0	24	20	40	16
Class C	4	16	20	52	8
Class D	4	20	24	44	8

There seems to be little question about the unpalatability of this statement. Most of these teachers have either failed to learn to appreciate the possibilities of multiple-grade grouping or else, possibly, there is not much to appreciate. Administrators, apparently, have difficulty in staffing multiple-grade classes. In many instances, these classes are probably staffed because there is no other choice.

10. Multiple-grade teaching becomes difficult only when a teacher tries to maintain rigid grade distinctions and does not permit an interrelation of activities among students.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	4	44	16	28	8
Class B	0	56	16	24	4
Class C	4	56	12	24	4
Class D	4	52	12	24	8

Agreement with this statement is fairly consistent in the responses. One administrator suggested that the statement would have been worded better if the term "only" had been eliminated. His conviction was that this is but one of many factors which makes multiple-grade teaching difficult. It may be inferred that the consensus of opinion is that difficulties do arise when a teacher tries to operate a rigidly graded program within a multiple-grade framework.

11. In a multiple-grade class, the teaching load is lightened somewhat by the fact that students can often assist the teacher by working with other students.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	0	72	4	8	16
Class B	12	84	4	0	0
Class C	8	72	4	4	12
Class D	8	76	4	4	8

There appears to be little doubt that the assistance provided by students is a demonstrable asset in the multiple-grade classroom. It would be more significant if it could have been determined to what extent and in what specific capacities such student assistance is rendered. Multiple-grade grouping actually has no corner on the utilization of student resources. Many teachers allow and encourage students to work with each other toward the solution of common problems. In other instances, the interaction of faster and slower students assists those slower students in making the progress they would normally miss from

inattention and lack of guidance. That which was commented by one teacher may actually be the sentiment of many, "If it weren't for the assistance of the students, I just couldn't handle it."

12. Providing for individual differences is much easier in a multiple-grade class since a wider range of materials for the several grade levels is already available.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	8	68	0	16	8
Class B	12	44	28	16	0
Class C	12	68	4	8	8
Class D	12	60	8	16	4

The extent to which a wide range of teaching materials satisfied the demand to meet individual needs is probably more adequately met in a multiple-grade classroom than in a single-grade classroom. The extent to which such materials are utilized, however, is not determined by this statement presented above. To thrust a second-grade reader into the hands of a child having reading difficulties with a third-grade reader is not, necessarily, meeting individual needs. Wise, selective utilization of materials in any type classroom organization is paramount to effectively meet the needs of individual children. The fact established by the responses to this question would appear to be that multiple-grade classrooms are, by nature, more adequately endowed with a wide range of materials at the teacher's instant command.

13. In multiple-grade classes, grade barriers are removed so that the teacher does not feel he has to cover a given amount of materials, but can devote his attention to the progress of the individual student.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	12	16	56	12
Class B	0	32	12	44	12
Class C	4	24	20	36	16
Class D	4	24	16	48	8

Pronounced disagreement with this is evident from the data above. Several individuals commented upon this statement; some of those comments being, "If grade barriers were removed, he could," "I can see no absence of grade demarcation," "I wish the superintendent would allow us to remove grade barriers," and "Have you heard about the nongraded program?" This latter comment is in reference to the type of school organization championed by John Goodlad. It would appear that most of these teachers and administrators look upon the multiple-grade group as a collection of grades that must be taught as grades with little departure from grade standards. If this be the case, in actual practice, the multiple-grade program loses much of its value. Of significance is the fact that the greatest disagreement to this statement is expressed by Group A. This may be due to the fact that this is the most inexperienced group or to the fact that this group has taught in multiple-grade groups only. To be considered, however, is the additional fact that these, more than

any other group, represent teachers who have had training in multiple-grade teaching. Is it possible that these teachers have actually been prepared to teach a traditionally graded program in a multiple-grade organization? To the extent that this is so suggests that the teacher education programs designed to prepare teachers for multiple-grade schools be re-evaluated.

14. Multiple-grade grouping results in greater cooperation and working together of teachers. These teachers have similar problems; hence, there is greater cooperative planning.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	52	32	12	0
Class B	0	40	40	16	4
Class C	4	44	32	16	4
Class D	4	44	32	16	4

Those teachers teaching only in multiple-grade groups appear to cooperate more closely than others. This may be due to a number of factors. Most of these teachers are in small schools--two or three teachers--where comradeship is more keenly sensed than in larger schools. These teachers also lack a comparative basis upon which to establish their opinion. Class B, representing teachers with experience in both single-grade and multiple-grade groups, however, are not too far removed in their opinions. These teachers, and administrators, would seem to suggest that grade barriers operate as walls not only about children but also about teachers. This is a significant point for consideration in school personnel relations.

15. Since a teacher of a multiple-grade class has the same students for more than one year, he knows these students better than a single-grade teacher could, and he can meet the needs of these students more effectively.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	24	68	4	4	0
Class B	16	72	8	0	4
Class C	8	76	8	4	4
Class D	16	72	4	4	4

If the above statement is analyzed, it will be discovered that the first portion expresses a concept so universal in its acceptance that it may be safe to assume the above responses in relation to the latter part of the statement. One of the respondees, now teaching a single grade, commented, "Just as I get to really know a child, I lose him." It is possible that this teacher is unduly slow in getting to know her students. The above responses, though, would indicate nearly unanimous agreement that the longer a teacher can work with a child, the more successful she should be in meeting his needs.

16. Multiple-grade groups are more like a real-life situation since students, outside of school, often choose younger or older students with whom to work or play.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	4	68	24	4	0
Class B	4	84	8	4	0
Class C	8	72	12	8	0
Class D	4	76	12	4	4

One of the arguments most consistently presented against homogeneous grouping, on most any basis, is that such grouping is not life-like. Occasionally we do encounter a group organized on the basis of a particular characteristic. The Rockettes in New York City's Music Hall, a snappy drill team, a picturesque water ballet, require such grouping. This, though, is not life. These are spectacles--groups that many individuals never encounter in a complete life-time. In addition, these are highly selective. It must be admitted that a child will discover restrictions imposed upon him by what he is or what he has. To a great extent, however, opportunity is given to most people to rise above such restrictions.

Society does not demand that children associate with, in work and play, other children of the same age. Communities do not relegate families with one-year-olds to one section, families with five-year-olds to another. Children learn to adapt to others older and younger than they. Through this experience children develop maturity on the one hand and consideration for others on the other hand. A school environment which continues and fosters this development would appear to be more advantageous than one which does not.

17. A wider range of age brings a wider range of experiences and capacities to the group, thus enriching the opportunity for each individual to learn and to be valued rather than envied or patronized.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	24	60	12	4	0
Class B	20	64	4	12	0
Class C	12	76	8	4	0
Class D	20	64	12	4	0

It is possible that the small amount of disagreement registered in the data above represents reaction to the latter part of the statement rather than the former. One of the six individuals disagreeing stated, "Sometimes the older children do patronize or take advantage of the smaller ones." The majority of individuals in the teaching profession have probably witnessed such incidents. In the multiple-grade group, however, such incidents ought to be at a minimum. The diversity of individuals, the range of abilities, the variety of associations should tend to minimize the bases for envy and patronization. Apparently, it does.

18. In multiple-grade classes, greater respect is developed for individuals in all grades since the prestige of being in a higher grade is largely removed.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	12	48	32	8	0
Class B	0	40	28	32	0
Class C	8	52	16	24	0
Class D	8	48	24	20	0

Reaction to this statement is provocative. General agreement is expressed with this statement by all groups except those who have taught in both types of grade organization. This could be explained by the fact that no great difference exists in the attitudes of children in either type of class organization. In response to an earlier question, all four groups were in marked agreement in establishing the fact the grade barriers continue to exist in the multiple-grade organization. Is it possible that the teachers and administrators are much more aware of the limitations which grade barriers impose than children are? This might explain the inconsistency between the responses to the statements in question.

19. In multiple-grade classes, grade barriers still operate to make distinct sub-groups within the class.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	60	16	12	8
Class B	4	68	16	12	0
Class C	4	68	12	12	4
Class D	4	64	16	12	4

The data supplied in response to the above statement would seem to support the observation made in the preceding section. It would appear, from a comparison of this data with that in response to other statements, that those grade barriers which exist do so by virtue of administrative decree or influence. To satisfy the demands of records, report cards, tradition, and public opinion, among other things, schools appear reluctant to operate outside the restrictions of grade barriers.

The sub-groups referred to above evidently are instructional units rather than social groups. Data presented elsewhere suggests that children cross over the grade lines in forming associations. Those individuals disagreeing with the statement have, possibly, taken advantage of the greater flexibility inherent within the multiple-grade organization.

20. In multiple-grade classes, greater emphasis is placed upon individual and small group instruction than in regular single grades.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	12	60	0	24	4
Class B	12	56	4	16	12
Class C	16	72	0	8	4
Class D	12	16	56	20	4

Persons acquainted with multiple-grade classes will recognize that this statement loses much of its significance in the light of responses to previous questions. A casual glance at the data above would seem to

indicate quite general agreement that individual and small group instruction is the vogue in multiple-grade groups. Such is the case. A mitigating factor, however, to what nearly approaches a platitude, is the fact that in a multiple-grade class wherein rigid grade boundaries are maintained, the teacher can operate in nothing but small groups. In the ideal situation, small groups are formed, irrespective of the grade-placement of its members. Whether the ideal is expressed above is unknown.

21. Children in multiple-grade classes learn to read better than children in single-grade classes.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	4	16	60	16	4
Class B	0	16	52	28	4
Class C	4	16	56	16	8
Class D	4	16	56	20	4

This statement is apparently very poorly worded, as evidenced by the large proportion of "no opinions". Approximately 20 per cent agree and 25 per cent disagree. The statement was constructed on the assumption that if grade barriers were minimized in a multiple-grade class, a wealth of material was available, and individual and small group instruction were common practice, children should learn to read better in these classes. Previous data would indicate that grade barriers are not removed; that, though a wider range of materials is available it may be limited in use by those grade barriers; and, small groups probably operate only within the confines of grade limitations. If this is so, little difference is to be expected.

22. In multiple-grades a wider range of reading groups is organized.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	4	56	24	16	0
Class B	0	80	4	16	0
Class C	4	72	12	12	0
Class D	4	68	12	16	0

If the observations to Statement 20 are accurate, then the results indicated above are greatly tempered. Though the responses are highly favorable, particularly from those teachers with experience in both multiple-grade and single-grade groups, it could well be a reference to the multiplicity of sub-groups within the several grade levels rather than a wide range of groups irrespective of grade levels. The latter, though, is possible within this type organization.

23. Greater social growth for all ages takes place in multiple-grade groups where pupils are of a wider age range.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	16	64	12	8	0
Class B	12	72	12	4	0
Class C	16	64	16	4	0
Class D	12	68	12	8	0

Theories of child growth and development would suggest that children's social development would be enhanced in the multiple-grade

environment. The respondees concur with this. It is significant to note that respondees from Classes B and D quite generally agree that such development is better in this type of environment. The respondees in these classes are teachers and administrators who have had experience with both types of organization.

24. Younger children profit from the stimulation of working with older children and learn much from them.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	24	68	4	4	0
Class B	24	76	0	0	0
Class C	12	80	4	4	0
Class D	20	76	0	4	0

Little doubt seems to exist among those polled that there is constant interaction within a classroom. A multiple-grade class offers a wider range of background experiences from which these children can draw. Younger children are challenged by the accomplishments of older students and exert added effort to make comparable achievements.

25. Multiple-grade grouping provides more effective learning;
pupils learn more from those who are different than from
those who are like themselves.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	8	52	12	24	4
Class B	0	60	12	28	0
Class C	8	52	4	32	4
Class D	4	56	8	28	4

This statement is so constructed that it invites a subscription to the principle that individuals learn more from those who are different than from those who are like themselves. While strong opinions are relatively limited, nearly one-third disagree with the principle. No comments were made in connection with this statement, so it has been impossible to ascertain what those in disagreement feel is learned from similar individuals. It is possible that inconsistency with the preceding statement is being expressed. If this is so, then these individuals are stating that they believe the stimulation to learn comes more from those who constitute a competitive basis than from those who constitute a non-competitive challenge. Multiple-grade grouping, however, is characterized by the differences which it fosters, and those differences constitute a basis for learning.

26. Discipline is better in multiple-grade groups as older students act as a quieting influence in the groups.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	0	32	8	44	16
Class B	0	32	16	52	0
Class C	0	12	8	80	0
Class D	0	12	36	44	8

Administrators are a little greater in their disagreement to this statement than are teachers, though there is a fairly marked disagreement among all groups. The statement itself is somewhat ambiguous and suggests conditions which some educators would challenge as being unsound. In the statement, discipline is equated with quiet orderliness. This does not necessarily have to be so. In fact, some classrooms with the poorest discipline are the quietest. Another weakness in the statement is the assumption that the younger students are the most restless and, consequently, the noisiest. Intermediate students are fully capable of creating disturbing conditions within a classroom. How the respondents interpreted this question is impossible to ascertain. The point which seems to be established is a warning that teachers of multiple-grade classes should not look to the older students for the solution of their disciplinary problems.

27. Older children learn a great deal in multiple-grade groups
by helping younger children.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	20	44	20	16	0
Class B	4	72	12	8	4
Class C	8	64	20	4	0
Class D	12	60	16	12	0

Though no indication is made as to what is learned, it appears that the respondents believe the older students learn a great deal of something. One person commented, "More social learning than academic." Another, however, said, "These experiences help to reinforce what the older children have already learned." As to what the others were considering when they responded remains a moot question.

28. Older children develop a willingness and ability to assume responsibility in a multiple-grade group.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	16	76	4	4	0
Class B	4	96	0	0	0
Class C	8	84	4	4	0
Class D	12	84	4	0	0

The ability to assume responsibility is, apparently, one of the things which older children learn in a multiple-grade group. The large percentage of agreement with the statement would suggest that such learning is quite obvious and, possibly, desirable. Many of the learnings of students in a multiple-grade group will be concomittant to the experiences

which are provided. The richness of experiences possible in a multiple-grade organization should never be minimized.

29. Cooperation of pupils is greater in multiple-grade groups since the basis for contention, rivalry, and competition with the rest of the group is largely removed.

	Percentage of Respondee's Indicating				
	SA	A	O	D	SD
Class A	8	40	16	36	0
Class B	4	52	12	28	4
Class C	12	40	8	40	0
Class D	8	44	12	32	4

The greatest expression of agreement with this statement is made by those who have taught in both multiple-grade and single-grade units. While the multiple-grade type of organization may tend to reduce the number of factors which foster competition and rivalry, no system can relieve it as effectively as the classroom teacher. In any type of classroom organization, competition can become the compelling motivation, if the teacher should so design. While one system may reduce the incidences for rivalry more than another, only the teacher can effectively allay the spirit of rivalry.

30. Children develop more effective study skills in multiple-grade classes, partly because they associate with older children who have developed these skills.

	Percentage of Respondees Indicating				
	SA	A	O	D	SD
Class A	8	32	20	40	0
Class B	4	52	16	24	4
Class C	8	40	20	32	0
Class D	8	40	24	28	0

Either the fact that children develop more effective study skills in a multiple-grade class or the fact that they develop such skills as a result of association with older children in that environment is questioned by nearly one-third of the respondents. Whereas skills are taught, then developed through usage, some respondents may have objected to the implication that skills might be learned through association with those already possessing such skills. The statement, however, qualifies such an implication with the term "partly." If the statement were not thus tempered, it would remain educationally sound. Is it possible that some teachers believe children can learn only from the teacher rather than from each other. When the sum total of all that children learn is considered, the amount for which a particular teacher is responsible is extremely small.

31. Group morale is better in multiple-grade groups since many of those factors causing tensions, jealousies, and competition are largely removed.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	0	48	16	32	4
Class B	0	32	40	28	0
Class C	0	44	24	28	4
Class D	0	48	24	24	4

The presence of group morale is easier to detect than the degree of such is to measure. From the data above, one might conclude that there is moderate agreement that a multiple-grade situation produces a better group spirit than does that of the single-grade organization. This is consistent with the opinions expressed by parents that the children were happy in a multiple-grade situation. The fact, however, that no comparable measure was made of the attitudes of children, tends to negate any great significance which may be attached to the statement.

32. In multiple-grade classes children are more willing to accept individual differences among themselves; the differences are more obvious, hence pupils are more inclined to accept those who are different from themselves.

Percentage of Respondees Indicating					
	SA	A	O	D	SD
Class A	8	64	4	24	0
Class B	0	68	20	12	0
Class C	8	68	0	24	0
Class D	4	68	8	20	0

The data above continues to establish the fact that children in a multiple-grade class readily accept the differences among themselves. So many obvious differences confront the students from day to day, that seldom does one particular trait appear deviate enough to warrant the ridicule or scorn which children are capable of heaping upon one of their peers. The atmosphere within the multiple-grade classroom is marked less by the drive for conformity. Conformity, in many respects, is absolutely impossible to achieve. Children are apparently, more willing to settle down to the task at hand, accepting themselves and others for what they actually are.

IV. TEACHERS' COMMENTS

At the end of each questionnaire, space was provided for comments in reply to the following two requests: what is the greatest problem of working with multiple-grade groups; and what are the greatest benefits? A rather limited number of individuals took the time to complete this section of the questionnaire. Of those comments submitted, most of them may be grouped about a concern for teaching all the subjects required in the various grades represented. Some of these comments are:

"The greatest problem is covering all work of the different grades."

"Finding time to get everything in."

"Too many grades to do everything required."

"The greatest problem is to get in all the classes in the allotted time."

"If there are too many grades, it requires too much planning."

"Teacher does not have time to cover material adequately in all grades."

"Time to get all required classes in."

"To get everything in that should be taught."

"Too little time to cover and teach the subjects."

"Getting all the classes in."

"The number of subjects to get in in such a small amount of time."

A review of these comments will indicate that most of the individuals are concerned about meeting subject-matter requirements of a particular class, school, or school system. Such comments are a significant indication that these teachers, at least, conceive of the multiple-grade classroom only as several single-grade classes thrust upon one unfortunate teacher.

The second category most often mentioned, one possibly related to that above, was time. Comments included:

"Time."

"Not enough time."

"The time element."

"Finding time to do all that should be done."

"Finding ample time to prepare challenging work for the many different needs."

"Not enough time in a day to teach all the grades."

"Not enough time for individual instruction and help."

"Problem of time."

"Time to get all the classes in."

"The lack of sufficient time for each grade's class discussion."

"No time to help students."

"If groups are too large, the time factor."

"Not enough time to spend with each grade."

The concern over insufficient time is related not only to the hours of actual school, but to the additional hours which are needed for preparation and evaluation. Comments indicative of this include:

"Time to prepare materials to keep all grades interested and profitably occupied at the same time."

"Teacher preparation."

"Not enough time in a day to prepare teacher's materials."

One individual stated his problem very concisely in these words:

"TOO MUCH WORK FOR THE TEACHER. We need tranquilizers!"

Another: "The added class load is too much."

The additional comments ranged over a variety of items from playground problems to insufficient teacher preparation. The majority of the comments, however, were devoted to the problem of meeting the additional demands which the multiple-grade organization demands. It must be stated that multiple-grade teaching is not easy. This, however, is true of single-grade teaching. Good teaching demands energy. Few teachers would have the energy to teach several grades in the course of one day. The point of frustration in multiple-grade teaching appears to be that too many teachers are trying to do just that--teach several separate and distinct grades in the time usually allotted for one. It is little wonder that one teacher calls for tranquilizers.

There is a positive side to the ledger, though. Burdened as they may be by multiple-grade teaching, these teachers recognize the benefits which such a program offers. The comments are most easily grouped under the three categories: social benefits to student, academic benefits to students, benefits to teachers. Typical comments under these included:

"Learning to live and work together."

"Social benefits for children."

"Children are exposed to a wider range of academic materials."

"Learning from each other."

"Learning respect for different age groups."

"Children learn to work independently."

"Children learn to accept help from other children without resentment."

"Younger children mature more rapidly."

"Gifted children in lower grades find added interests."

"Children learn to accept individual differences."

"Learning consideration for others."

"Children learn to share."

"Greater social growth."

"Younger children stimulated by older ones."

"Older children are able to review as they help younger children."

"Wider range of children's ages brings greater enrichment to the class."

"Older children learn to accept responsibility."

"Younger children learn to appreciate the older students."

"Environment is most like a family situation."

"Learning to get along with all types of people."

"Older pupils can assist the teacher in routine matters."

"The teacher has a chance to learn from a wider range of children.

She is able to appreciate the developmental stages through which each child progresses. This keeps a teacher alive."

V. ADMINISTRATORS' COMMENTS

Administrators were provided the same opportunity extended to the teachers to react to similar questions. In this case, however, the questions pertained to administrative problems and benefits. The responses were much more limited than those received from the teachers. Administrators, as did the teachers, commented largely about the problem of time. It is possible that this is the greatest source of pressure under which the teachers work. Typical comments included:

"Single-grade schools have more time."

"Time to cover all necessary work daily."

"Lack of time; teachers can't cover work required."

"Not to overlook what is required of any one particular grade."

Other comments submitted by administrators covered a variety of subjects. Most are self explanatory. These included:

"Convincing the parents of the advantages of the multiple-grade room." It is of interest to note that this administrator strongly disagreed with a statement in the questionnaire which stated that parents are reluctant to have their children in multiple-grade classrooms.

"Getting qualified teachers willing to assume the extra work entailed in a multiple-grade class."

"Trying to equalize class loads within a given school."

"Securing adequate financial support."

"Discipline."

"Being able to run a good school program unhampered by grade barriers."

One administrator gives insight into his philosophy with the comment, "It is difficult, if not impossible, to actually fail a student in a grade. Half the time he's in more than one grade."

Administrators, though, recognized advantages in the multiple-grade organization. Most of the comments were similar to those rendered by the teachers regarding academic and social development. Some, on the other hand, afford a momentary glimpse into the administrative thinking of a few school personnel. These include:

"We can get the work done for half the cost."

"It gives me less teachers to worry about."

"I am able to know the students better because the teachers know them better."

In the final analysis, one administrator stated, "I can really see no great difference in terms of advantages or disadvantages between the multiple-grade and the single-grade groups." Data presented in Chapters IV and V tend to corroborate this observation.

VI. SUMMARY

This chapter has attempted to present data in evaluation of two of the hypotheses included in this study. These hypotheses were that teachers experienced in multiple-grade teaching prefer this type of organization, and administrators experienced in this type of organization find no greater administrative problems than those encountered in a traditionally graded school.

To secure the data for the purposes of evaluation, it was necessary to construct a special instrument. This instrument included thirty-two statements about multiple-grade grouping to which the respondent was to react along a five-point scale. The data secured from this instrument have been presented in the preceding pages. A complete copy of the questionnaire may be seen in Appendix VII.

The data presented throughout this chapter were submitted by one hundred teachers and administrators. Each of these individuals had had some previous experience with a multiple-grade group. In some instances, such experience was attained in a small rural school; in others, in a moderate-sized urban school. Also included are the responses of a limited number of teachers and administrators from campus laboratory schools where a portion of the teacher education program is devoted to the techniques of teaching in multiple-grade classrooms. From the data presented, is indicated the fact that these individuals believe definite advantages are to be found in multiple-grade grouping. At the same time, however, there is an indication that the physical and emotional burden placed

upon the teacher, in an effort to accrue these advantages, is more than most of them care to bear.

The data presented in Chapters IV and V might indicate that the opinions expressed in this chapter are largely the result of bias or unfounded assumptions. The fact that these observations are made by individuals experienced in both single- and multiple-grade teaching might suggest that the data presented in Chapters IV and V are peculiar to the one school studied, rather than to multiple-grade grouping in general. This conclusion is supported by the findings of Rehwoldt, reported in Chapter I.

What is the largest factor mitigating against the achievement of those advantages which these teachers and administrators are confident exist in the multiple-grade program? An analysis of the data in this chapter, supported by the data from Chapters IV and V, would suggest that this factor, probably more than any other single cause, is the degree to which teachers and administrators maintain the graded structure within the multiple-grade organization. Teachers indicate that these barriers remain due to the administrative pressure to operate within such a system. Teachers, however, appear reluctant to transcend those boundaries even when such action seems to be the most logical course to follow. Both teachers and administrators express undue concern for the content of the curriculum. It would appear that the actions of both administrators and teachers are determined largely by the perspective with which they view content. That perspective does not appear to be too unlike that viewed in the majority of single-grade classes. Until a philosophy of multiple-

grade grouping can be articulated and accepted, multiple-grade grouping will probably continue to diminish from the American educational scene.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

I. INTRODUCTION

This study was conducted to evaluate a type of elementary school organization in which students were grouped into multiple-grade units. These units were classrooms in which from two to four different grade levels were represented and were taught by one teacher. The study was considered important for very limited research had been conducted in this area during the preceding fifteen years and the data presented in these studies support contradictory conclusions.

The hypotheses tested in this study were that students in multiple-grade groups would achieve greater academic, personality, and social development than comparable students in single-grade groups; that parents acquainted with the nature of multiple-grade units prefer this type of grouping experience for their children; and, teachers and administrators with experience in this type of grouping recognize its advantages and prefer it above single-grade grouping.

II. LIMITATIONS

The significance of the results of this study for schools, in general, should be considered within the limitations imposed by conditions existing during the study. These limitations include:

1. The population sample was too small to make sweeping generalizations regarding the effect of multiple-grade grouping upon children. This sample numbered sixty-eight.

2. The multiple-grade group sampling was taken from only one school; the results may be more peculiar to this school than to others with multiple-grade units.
3. The large number of individuals needed to administer the various tests increased the chances for error in such administration. The extent of this error is not known.
4. The Stanford Achievement Test, utilized to secure data on academic achievement, does not adequately measure the full extent of academic achievement by either the multiple-grade or the single-grade group.
5. The California Test of Personality, utilized to secure data on personality and social development, despite the efforts of the authors, is suggestive of the "right" answer. The extent to which the results are evidence of the students' ability to recognize the acceptable norm of their society rather than an indication of their actual development is not known.
6. The fact that a before-and-after situation could not be arranged for this test limits the significance of the data presented. It is not possible to accurately evaluate the amount of growth that occurred in a year of multiple-grade group experience.
7. The fact that the data presented represents only a single sampling rather than the results of a longitudinal study, limits the extent to which generalizations can be made.

8. The extent to which bias operates, both in the subjective data submitted for this study and in the interpretation of all data presented, limits the significance of the conclusions drawn from that data.
9. The fact that the multiple-grade group was not organized as an experimental group has produced data more indicative of what teachers were actually accomplishing in multiple-grade groups rather than what teachers could accomplish under such an organizational set-up.
10. More significance could be attached to the results of the evaluation of parental attitudes towards multiple-grade grouping if the sampling had included the opinions of the parents of the students constituting the single-grade group.

Despite these limitations, the data presented does serve to indicate what is being accomplished in one multiple-grade group as well as identifying aspects of the problem of this type grouping which require additional research.

III. SUMMARY

The data secured through the administration of the Stanford Achievement Tests indicate that the multiple-grade group, at each grade level, achieved higher mean scores, with very few exceptions, than did the single-grade group. In none of the academic areas, however, were there any significant differences between the means. [There was some evidence in the data presented that the slightly higher means achieved by the multiple-



grade groups were the result of multiple-grade grouping. This evidence is the consistency of these higher means.

The data secured through the administration of the California Test of Personality closely parallel the data secured in the evaluation of academic achievement. The multiple-grade group, with very few exceptions, achieved consistently higher scores in personality and social development than did the single-grade group. In five of the eight areas measured, there were statistically significant differences between the means in favor of the multiple-grade group. These areas were: sense of personal worth, feeling of belonging, freedom from withdrawing tendencies, social skills, and freedom from anti-social tendencies. In each of these areas, however, the significance applied to only one grade level; in three areas the sixth grade achieved significant differences; the other two were both achieved by the third grade.

Data from the responses of ninety parents were presented in Chapter VI. Of this number sixty had had their children enrolled in multiple-grade units previously. All of these parents had children in the multiple-grade group referred to in this study. Their responses are, largely, an evaluation of that particular group. Data presented suggests that the parents are pleased with the results of the multiple-grade program, that the children are happy with the school program, that the parents agree with the policy of having a student remain with a given teacher more than one year, that they are concerned about the slower student in the multiple-grade unit, and that they would prefer the advantages of the multiple-grade class within a single-grade class.

Nearly 75 per cent of the respondees indicated that they did not prefer multiple-grade classes for their children.

Responses to thirty-two statements about multiple-grade students were presented in Chapter VII. These responses were submitted by one hundred teachers and administrators who had had an average of more than twelve years' experience with multiple-grade grouping. A number of the administrators had had teaching experience in multiple-grade classes. Half of this group of one hundred had also had experience with single-grade classes. The high consistency of the responses to these statements tends to validate the questionnaire which was designed for this purpose.

The responses of the teachers and administrators tend to confirm the implications of the responses made by parents. All groups are confident that multiple-grade grouping, at least in theory, is good. Both teachers and administrators indicate their belief that students make better academic, social, and personality development in the multiple-grade environment. This professional group appears to be unaware of parental objections regarding their children being placed in multiple-grade units.

Most of the positive opinions expressed about multiple-grade grouping refer to the benefits for the student. Negative attitudes appear when the teacher or administrator gives attention to the implications of such organization for professional personnel. Responses seem to indicate that the increased problems attending multiple-grade grouping make this type of organization unpalatable to most of the respondees.

The two previous studies conducted in the area of multiple-grade grouping have been reported in Chapter I and referred to throughout this

study. The data presented in this study, relative to academic and social development, tend slightly to support the findings of Rehwoldt that students in multiple-grade groups do better. The data presented, relative to parental, teacher, and administrator attitudes, would appear to support Foshay's conclusions that any advantage which the multiple-grade type of organization has to offer can be duplicated in the single-grade classroom through the utilization of more flexible grouping than commonly exists.

IV. CONCLUSIONS

The data presented in this study, modified by the limitations stated in this chapter, would appear to warrant the following conclusions:

1. Multiple-grade grouping offers no significant academic advantage over single-grade grouping.
2. Multiple-grade grouping does not, on the other hand, create significant liabilities to academic development.
3. Multiple-grade grouping slightly enhances the student's opportunity for personality and social development.
4. Multiple-grade grouping, where necessarily employed, can compare favorably with single-grade grouping.
5. A philosophy of multiple-grade grouping needs to be articulated for the public and for the profession.
6. The success of multiple-grade grouping appears to be curtailed to the extent that traditional grading practices are maintained within the multiple-grade class.

7. Teacher-education courses, where practical, should give greater attention to the peculiarities of multiple-grade grouping.

V. IMPLICATIONS

The foregoing conclusions would imply that the arguments presented in Chapter II for multiple-grade grouping need to be modified. Though there appear to be some advantages to multiple-grade grouping, these advantages are not sharply defined. While it is possible to argue that these advantages would have been more apparent had different techniques and practices been employed in the multiple-grade classes, this remains to be demonstrated.

The equivocal nature of the findings of this study makes the deliberate formation of multiple-grade classes, where circumstances do not warrant, a questionable practice. Considerable research needs to be done in the area of multiple-grade grouping before sweeping generalizations can be made. Research in the closely related areas of interage and nongraded grouping is also necessary.

An implication of this study, which should not be overlooked, is that bases other than academic, personality, and social development, should be considered before the many multiple-grade schools in rural areas of America are completely eliminated. Data suggest that these schools can perform satisfactorily in the education of children from rural areas.

A further implication is that multiple-grade schools, where in operation, should be staffed by qualified personnel. While practical factors make the procurement of such teachers a difficult task,

multiple-grade grouping will be successful only when qualified personnel are administering it.

The chief implication of this study is that multiple-grade grouping demands a different perspective than single-grade grouping. As long as single-grade standards and patterns of operation are duplicated in the multiple-grade class, personnel will be most reluctant to work in the multiple-grade situation, and the results of multiple-grade grouping will be little different from those already achieved in single-grade grouping. When the limitations imposed by grade barriers are removed, when teachers are willing to cut across all types of "lines" in meeting children's needs, and when interest in the total development of children transcends all other considerations, multiple-grade grouping, or a modification of such, will be ready for significant testing.

VI. RECOMMENDATIONS FOR ADDITIONAL RESEARCH

Before multiple-grade grouping is widely adopted or condemned, some questions require further examination. Some of these are:

1. What steps can be taken to remove the pressure of "grade barriers" in the multiple-grade group? Is it better to modify multiple-grade grouping to the extent that a non-graded organization has been effected? Can grade levels be maintained for certain classification purposes without limiting the learning experiences of the children involved? Can instructional materials, now in use, be utilized for learning in a variety of grade levels? Are instructional

materials designed primarily for a multiple-grade group feasible?

2. What preparation is needed by teachers serving in a multiple-grade organization? Are specific skills employed in this type of grouping that are not utilized in single-grade grouping? Should teachers be left to adapt to the multiple-grade requirements or prepared for them before meeting such?
3. What are the administrative problems peculiar to multiple-grade grouping? Is it possible to keep track of a child's progress when he is working at several different levels at once? Does multiple-grade grouping suggest a different concept of school facilities? Does multiple-grade grouping necessitate the services of only one teacher within each group? Would a difference in school design be suggested by multiple-grade grouping? What are the implications for flexibility in scheduling the school day? How much can older students be utilized?
4. What are the implications in curriculum experiences for children in multiple-grades? How much greater is the student's enrichment in the arts as a result of the multiple-grade experience? How much greater insight does a student in the multiple-grade group achieve as he is exposed to a larger content pattern? How much stimulation does a student receive to make advances in academic knowledge and skills through association with those possessing such knowledge and skills?

5. What is the full nature of the effects of multiple-grade grouping on personality and social development? Is the psychological impact greater on the younger or the older child? Are there too many subtle pressures upon the child to mature too rapidly? Do children prefer some time with other children of the same age? Do older children resent limitations imposed by their association with younger children? Do younger children feel frustration in always being outdone by older children? Are children satisfied with their recreational pursuits when a wide range of ages must be considered? Do status groups form more easily in multiple-grade classes than in single-grade classes? Are associations terminated quickly at the close of the school day by students in multiple-grade groups? How does a multiple-grade group accept the differences of an anti-social student? Do children with anti-social tendencies develop normal behavior more rapidly in multiple-grade groups?

The implications of this study for additional research are legion. The data presented in this study are far from conclusive. Additional data, secured from extensive research in the dynamic area of grouping, is demanded by the large number of multiple-grade groups which exist throughout the country. Research holds the key to the future.

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APPENDICES

APPENDIX I

SHEET #1

GRADE 3

Teacher: B.S. Degree
37 Years' experience

Code	Grade	Sex	Age		I.Q.
			Yrs.	Mos.	
101	3	M	8	10	98
102	3	M	8	8	110
103	3	M	10	5	94
104	3	M	9	5	100
105	3	M	9	1	115
106	3	M	9	5	99
107	3	F	9	7	116
108	3	M	9	6	110
111	3	F	9	3	115
112	3	F	10	9	118
113	3	F	9	9	130
114	3	M	9	5	107
115	3	M	10	1	104
116	3	M	8	8	101
117	3	F	9	3	130
118	3	M	10	3	122
119	3	F	10	0	120

Teacher: M.Ed. Degree
34 Years' experience

160	3	M	10	0	100
161	3	F	9	9	101

Grade 4

Code	Grade	Sex	Yrs.	Mos.	I.Q.
162	3	M	8	7	103
163	3	M	9	11	133
164	3	F	8	4	105

Grade 4

Teacher: B.S. Degree
37 Years' experience

121	4	M	10	8	131
122	4	F	10	8	98
123	4	M	10	8	126
124	4	F	10	11	115
125	4	M	10	6	89
126	4	F	10	8	120
127	4	M	10	4	116

Teacher: M.Ed. Degree
34 Years' experience

165	4	M	9	5	119
166	4	M	9	9	108
167	4	F	9	8	82
168	4	M	11	7	134
169	4	F	9	9	142

SHEET #1a

GRADE 5

Teacher: B.S. Degree
5 Years' experience

Code	Grade	Sex	Age		I.Q.
			Yrs.	Mos.	
130	5	F	11	3	131
131	5	F	11	5	116
132	5	F	11	6	107
133	5	F	11	3	125
134	5	M	11	8	104
137	5	F	10	3	122
138	5	M	11	1	127
139	5	F	11	10	125
140	5	F	12	0	103
141	5	M	11	6	98
142	5	M	11	5	108
143	5	F	11	8	81
144	5	M	10	10	123

Teacher: M.Ed. Degree
34 Years' experience

170	5	F	10	9	108
171	5	F	12	0	107
172	5	M	10	10	119
173	5	F	11	9	109
174	5	M	11	7	113

GRADE 6

Teacher: B.S. Degree
5 Years' experience

Code	Grade	Sex	Age		I.Q.
			Yrs.	Mos.	
145	6	F	11	10	112
146	6	M	12	5	104
147	6	F	12	5	92
148	6	M	12	6	79
149	6	M	11	5	91
150	6	M	11	7	110
151	6	F	11	5	97
152	6	M	12	0	110
153	6	F	11	6	104
154	6	F	11	3	110
155	6	M	12	9	114
156	6	F	11	4	99
157	6	M	11	8	131
158	6	M	11	3	102
159	6	F	11	5	130

Teacher: M.Ed. Degree
34 Years' experience

175	6	F	11	8	116
176	6	M	12	3	116
177	6	F	12	1	133
178	6	M	11	5	151
179	6	F	11	11	108

APPENDIX II

Dear Teacher:

Your Principal has handed you this letter because he feels you might be interested in assisting us in a proposed study. Our Laboratory School has been cooperating with the College of Education at the University of Tennessee in a study to determine the effects upon the academic and social development of elementary students grouped in multiple-grade classes.

It is our desire to match the students of the experimental group with students in Chattanooga and Hamilton County. You have been contacted because you have approximately the same professional qualifications as a teacher working with the experimental group. If you are willing to invest the amount of time which it takes to administer two tests, we would appreciate your looking over the enclosed list of students. You will note that each student is identified by a code number.

If you have a student in your room who is the same sex, within six months of the same age, and within five (5) points of the same I.Q. (Lorge-Thorndike Test), we would like to have you mark the code number of the student on the list whom you are matching, and the data which applies to the student from your room, on the enclosed postcard. The student(s) which you match from your room must come from the section under the teacher whom you best match.

When we receive this card in our office, we will assign a code number to your student. A copy of the Stanford Achievement Test and a copy of the California Test of Personality, identified with your student's code number, will be sent to you. We will suggest an approximate date near the end of May when we would like to have the tests administered. A stamped, addressed envelope will be supplied with the tests for their return. All scoring will be done at the University of Tennessee.

I am very appreciative of the demands which are made upon your time, especially as school draws to a close. I believe, however, the satisfaction which you will receive from your cooperation, in addition to the contribution which this study will make, will provide a measure of reward for your effort.

Sincerely,

(signed)

E. Stanley Chace, Director
Arthur W. Spalding School

APPENDIX III

Dear Sir:

I will cooperate with your school and the University of Tennessee in the proposed study. I am willing to administer the two tests: Stanford Achievement Test and California Test of Personality to the following student(s):

No.	Grade	Sex	Age	yrs.	mos.	I.Q.
-----	-------	-----	-----	------	------	------

No.	Grade	Sex	Age	yrs.	mos.	I.Q.
-----	-------	-----	-----	------	------	------

NAME

SCHOOL

Address

APPENDIX IV

Dear Sir:

Within the last few days you have received word from the Superintendent of Schools concerning a study to be conducted in this area. Your cooperation in securing the data for this study would be appreciated.

Much attention has been given to the problem of school organization. This is especially true of the organization of classes within the school. Systematic study has been neglected, however, in one area--multiple-grade grouping.

The Laboratory School of Southern Missionary College has operated multiple-grade classes for a number of years. Many of your colleagues are acquainted with this program. Whether this program has any merit for schools in general is something that needs to be tested.

We would like to match the students in grades 3 through 6 with students from schools in Chattanooga and Hamilton County. We would like to match these students, however, within the limits of several controls.

Accompanying this letter are four packets of materials. We would appreciate your giving one packet to each teacher on your staff who meets the following qualifications: (1) she must have the same degree (or equivalent) as listed below; and, (2) she must have no greater than three (3) years' difference in teaching experience than that listed.

Grade 3 -- Bachelor of Science
37 years' exper.

Master of Education
34 years' exper.

Grade 4 -- Bachelor of Science
37 years' exper.

Master of Education
34 years' exper.

Grade 5 -- Bachelor of Science
5 years' exper.

Master of Education
34 years' exper.

Grade 6 -- Bachelor of Science
5 years' exper.

Master of Education
34 years' exper.

Complete instructions are included in each packet for the classroom teacher. If she is willing to assist in administering two tests, and returns the postcard provided, we shall conduct further correspondence with her, relieving you of any additional inconvenience.

Data will be gathered relative to the academic and social progress of students in multiple-grade classes as compared with that of similar students in single-grade classes. The results of this data shall be available to you, if you so request.

Letter to Principal -- page 2

Your participation in this study is voluntary. Your school will not be identified, nor will the participating students. If you do not wish to participate, or are unable to find any member of your staff meeting the above qualifications, feel free to dispose of the accompanying materials. They do not have to be returned.

Your cooperation in this matter is greatly appreciated.

Sincerely,

(signed)

E. Stanley Chace, Director
Arthur W. Spalding School

APPENDIX V

Dear Teacher:

Enclosed are the tests which have been coded for the student(s) in your room. All you need to do is to administer the tests and to return them at your earliest convenience.

We would like to have both tests administered sometime between May 16 and May 24 inclusive. They do not have to be administered the same day.

The following information about the tests may be of help to you:

CALIFORNIA TEST OF PERSONALITY

All Grades: This test is to be administered in one sitting. The child is to answer each question by drawing a circle around the "yes" or "no", depending on how he feels about the statement. There are no "rights" or "wrongs".

STANFORD ACHIEVEMENT TEST

1. Elementary Battery (Grades 3 & 4)

The complete battery should not be given at one sitting. Divisions may be made according to your convenience. The time for each separate test is given below. It is imperative that we adhere to these strictly.

1. Paragraph Meaning -- 25 min.
2. Word Meaning -- 8 min.
3. Spelling -- 20 min. (approximately)
4. Language -- 25 min.
5. Arith. Reasoning -- 30 min.
6. Arith. Computation -- 25 min.

Note: The list of words for the Spelling Test (Test 3) is enclosed with the test.

2. Intermediate Battery (Grades 5 & 6)

The complete battery should not be given at one sitting. Divisions may be made according to your convenience. The time for each separate test is given below. It is imperative that we adhere to these strictly.

1. Paragraph Meaning -- 25 min.
2. Word Meaning -- 12 min.
3. Spelling -- 15 min.
4. Language -- 16 min.

Letter of Instruction -- page 2

- 5. Arith. Reasoning -- 35 min.
- 6. Arith. Computation-- 35 min.
- 7. Social Studies -- 20 min.
- 8. Science -- 15 min.
- 9. Study Skills -- 40 min.

If more than one test is administered at one sitting, allow 2 minutes relaxation between tests. If you should have any questions relative to the administration of these tests, feel free to call me COLLECT, at EXport 6-3225.

Again, may I express my appreciation for your cooperation in this study.

Sincerely,

(signed)

E. Stanley Chace, Director
Arthur W. Spalding School

APPENDIX VI

PARENTS' EVALUATION OF MULTIPLE-GRADE CLASSES

Your child is enrolled in a school in which he will be placed with a group made up of more than one grade. Your child will be working daily with children of a wider age range than he would in a regular single-grade plan of organization. Your child will also be spending more than one year with the same teacher. We would appreciate your frank responses to the following questions. No signature is necessary. Please respond to each question, even though you are not quite certain how you feel.

- | | | | |
|-----|----|-----|---|
| Yes | No | 1. | Is this the first time your children have ever been in a multiple-grade class? |
| Yes | No | 2. | Do you prefer multiple-grade classes for your child? |
| Yes | No | 3. | Do you think it is a good idea to have children continue with the same teacher more than one year? |
| Yes | No | 4. | Do you think that having several grades in one room gives the <u>slower</u> learner a better chance to develop? |
| Yes | No | 5. | Do you think that having several grades in one room gives the <u>faster</u> learner a better chance to develop? |
| Yes | No | 6. | Do you think it is good to have older and younger students in the same room? |
| Yes | No | 7. | Do you think that the pupils with whom your child is grouped at school have any significant effect upon his learning? |
| Yes | No | 8. | Do you think it is a good idea to teach skills to children in as small groups as possible? |
| Yes | No | 9. | Do you think your child will make as much progress in this multiple-grade organization as is possible? |
| Yes | No | 10. | Do you think that pupils in a classroom should be about the same age? |
| Yes | No | 11. | Do your children like to go to school? |
| Yes | No | 12. | Do you think your child gets along well with the other children in his room? |

- | | | | |
|-----|----|-----|--|
| Yes | No | 13. | Do you think your child (will show) (has shown) more progress in the 3 R's than he would have in a single-grade program? |
| Yes | No | 14. | Do you think your child (will show) (has shown) more progress in social development than he would have in a single-grade program? |
| Yes | No | 15. | Do you think it is better for children to have a different teacher each year? |
| Yes | No | 16. | Do you think the school is providing adequately for the differences of individual children? |
| Yes | No | 17. | Do you feel that teachers in multiple-grade classrooms are so busy with the "extra" grades that they are unable to help children as much as is needed? |

Any additional comments about multiple-grade classes as compared with single-grade classes which you might care to make on the back of this sheet would be greatly appreciated.

APPENDIX VII

ADMINISTRATOR AND TEACHER EVALUATION OF MULTIPLE-GRADE GROUPING

The following statements identify common assumptions made about grouping children of a wide grade and age range in the same class. In the light of your experience with such groups, will you please react to the degree that you have found them to be true. No signature is necessary; please be frank.

Please fill in the appropriate blanks.

RATING SCALE

- | | |
|--|------------------------|
| Have taught multiple-grades only. __years. | SA - Strongly Agree |
| Have taught both single and multiple-grades
__years, single; __years, multiple. | A - Agree |
| | O - No Opinion |
| Have been principal of school with multiple-
grades only. __years. | D - Disagree |
| Have been principal of school with both
single and multiple-grades. __years. | SD - Strongly Disagree |
-

Feel free to write in supplementary comments after any item, or on reverse side.

- | | | | | | |
|----|---|---|---|----|---|
| SA | A | O | D | SD | 1. Administrative problems are no greater with multiple-grade classes than with regular classes. |
| SA | A | O | D | SD | 2. Students give no evidence of hesitancy about becoming members of multiple-grade classes. |
| SA | A | O | D | SD | 3. Most parents are reluctant about their children being placed in a multiple-grade class. |
| SA | A | O | D | SD | 4. Parents identify this type of grouping with the popular concept of inferior rural education. |
| SA | A | O | D | SD | 5. Once parents understand the advantages of multiple-grade grouping, they are quite willing for their children to be placed in such classes. |

- | | | | | | | |
|----|---|---|---|----|-----|--|
| SA | A | O | D | SD | 6. | Most parents are pleased with their children's experiences and development in a multiple-grade class. |
| SA | A | O | D | SD | 7. | Assignment of students to classes is much easier in a multiple-grade school since no special distinction need be made as to proper grade level; students can be placed in a room according to their abilities. |
| SA | A | O | D | SD | 8. | Multiple-grade teaching is not more difficult than single-grade teaching since both types of organization require further grouping. |
| SA | A | O | D | SD | 9. | After teachers have become accustomed to multiple-grade classes, they prefer this type of class organization above single-grade classes. |
| SA | A | O | D | SD | 10. | Multiple-grade teaching becomes difficult only when a teacher tries to maintain rigid grade distinctions and does not permit an interrelation of activities among students. |
| SA | A | O | D | SD | 11. | In a multiple-grade class, the teaching load is lightened somewhat by the fact that students can often assist the teacher by working with other students. |
| SA | A | O | D | SD | 12. | Providing for individual differences is much easier in a multiple-grade class since a wider range of materials for the several grade level is already available. |
| SA | A | O | D | SD | 13. | In multiple-grade classes, grade barriers are removed so that the teacher does not feel he has to cover a given amount of material, but can devote his attention to the progress of the individual student. |
| SA | A | O | D | SD | 14. | Multiple-grade grouping results in greater co-operation and working together of teachers. These teachers have similar problems; hence, there is greater cooperative planning. |

- SA A O D SD 15. Since a teacher of a multiple-grade class has the same students for more than one year, he knows these students better than a single-grade teacher could, and he can meet the needs of these students more effectively.
- SA A O D SD 16. Multiple-grade groups are more like a real-life situation since students, outside of school, often choose younger or older students with whom to work or play.
- SA A O D SD 17. A wider range of age brings a wider range of experiences and capacities to the group, thus enriching the opportunity for each individual to learn, and to be valued rather than envied or patronized.
- SA A O D SD 18. In multiple-grade classes, greater respect is developed for individuals in all groups since the prestige of being in a higher grade is largely removed.
- SA A O D SD 19. In multiple-grade classes, grade barriers still operate to make distinct sub-groups within the class.
- SA A O D SD 20. In multiple-grade classes, greater emphasis is placed upon individual and small group instruction than in regular single grades.
- SA A O D SD 21. Children in multiple-grade classes learn to read better than children in single-grade classes.
- SA A O D SD 22. In multiple-grade classes, a wider range of reading groups are organized.
- SA A O D SD 23. Greater social growth for all ages takes place in multiple-grade groups where pupils are of a wider age range.
- SA A O D SD 24. Younger children profit from the stimulation of working with older children and learn much from them.

- | | | | | | | |
|----|---|---|---|----|-----|--|
| SA | A | O | D | SD | 25. | Multiple-grade grouping provides more effective learning; pupils learn more from those who are different than from those who are like themselves. |
| SA | A | O | D | SD | 26. | Discipline is better in multiple-grade groups as older students act as a quieting influence in the groups. |
| SA | A | O | D | SD | 27. | Older children learn a great deal in multiple-grade groups by helping younger children. |
| SA | A | O | D | SD | 28. | Older children develop a willingness and ability to assume responsibility in a multiple-grade group. |
| SA | A | O | D | SD | 29. | Cooperation of pupils is greater in multiple-grade groups since the bases for contention, rivalry, and competition with the rest of the group are largely removed. |
| SA | A | O | D | SD | 30. | Children develop more effective study skills in multiple-grade classes partly because they associate with older children who have developed these skills. |
| SA | A | O | D | SD | 31. | Group morale is better in multiple-grade groups since many of those factors causing tensions, jealousies, and competition are largely removed. |
| SA | A | O | D | SD | 32. | In multiple-grade classes children are more willing to accept individual differences among themselves; the differences are more obvious, hence pupils are more inclined to accept those who are different from themselves. |

For Teachers

Please state what you think to be the greatest problem of working with multiple-grade groups;

the greatest benefits.

For
Administrators

Please state what you think to be the greatest problem of operating a school in which multiple-grade grouping is practiced;

the greatest advantage over single-grade grouping.