A STUDY OF THE EFFECTS OF MULTI-GRADE GROUPING ON THE ATTITUDES TOWARD SELF, PEERS, AND SCHOOL OF SELECTED THIRD AND FIFTH GRADE STUDENTS

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ABSTRACT

A STUDY OF THE EFFECTS OF MULTI-GRADE GROUPING ON THE ATTITUDES TOWARD SELF, PEERS, AND SCHOOL OF SELECTED THIRD AND FIFTH GRADE STUDENTS

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Purpose of the Study

It was the purpose of the study to determine whether there are differences in attitudes toward self, classroom peers, and school of elementary students in multi-graded classes as compared to similar elementary students in single-graded classes.

Procedures

The population for the study consisted of 800 students in the third and fifth grades in three school districts in Genesee County, Michigan. Included were children in each of the two grades in one school in each district who had been grouped into only single-graded classes since kindergarten and children in each of the two grades in another school in two of the districts, and the same school in one district, who had been grouped into only multi-graded classes since kindergarten. The schools

within each district were matched on the basis of socio-economic status, academic achievement and race. In addition, teachers and principals of single-graded schools and teachers and principals of multi-graded schools involved were approximately the same in terms of their measured attitudes toward the type of student grouping used in their respective schools.

Each student was administered the following instruments:

1. The Coopersmith Self-Esteem Inventory, to measure attitudes toward self.
2. A sociometric questionnaire, to measure attitudes toward classroom peers.
3. The Morse Pupil Attitude Questionnaire, to measure attitudes toward school.

A multiple-classification analysis of variance of unequal size groups was employed by computer application for the analysis of the data.

Findings

The findings of this study were interpreted in terms of the following hypotheses:

Hypothesis 1:

Elementary students in multi-graded classes develop more positive attitudes toward self than students in single-graded classes.

Hypothesis 2:

Elementary students in multi-graded classes develop more positive attitudes toward their classroom peers than students in single-graded classes.

Hypothesis 3:

Elementary students in multi-graded classes develop more positive attitudes toward school than students in single-graded classes.

The following results of the statistical analysis of scores achieved by the elementary students on the three measures of attitudes used in this study clearly indicated that multi-grade grouping has a positive effect upon measured attitudes.

For measured self-concept, students in single-graded classes obtained a composite mean score of 27.81, while students in multi-graded classes obtained a composite mean score of 30.62. The difference, which favored the multi-graded children, was significant at the .0005 level.

A composite mean score of 24.72 was achieved by the single-graded students for attitudes toward classroom peers, while multi-graded students achieved a composite mean score of 28.34. Again, the difference, significant at the .0005 level, favored the multi-graded children.

For attitudes toward school the single-graded children attained a composite mean score of 68.31 while a composite mean score of 70.97 was attained by the

multi-graded children. The difference, which again favored the multi-graded children, was significant at the .02 level.

Conclusions

1. Elementary students who have been grouped into only multi-graded classes since kindergarten develop more positive attitudes toward self than similar students who have been grouped into only single-graded classes since kindergarten.

2. Elementary students who have been grouped into only multi-graded classes since kindergarten develop more positive attitudes toward classroom peers than similar students who have been grouped into only single-graded classes since kindergarten.

3. Elementary students who have been grouped into only multi-graded classes since kindergarten develop more positive attitudes toward school than similar students who have been grouped into only single-graded classes since kindergarten.

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Joy B. Carter

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CHAPTER I

INTRODUCTION

Few people would disagree that attitudes held by individuals play an important role in human affairs. A look at contemporary American society verifies the fact that attitudes are regarded as highly significant. In the political sphere, candidates for public office spend large amounts of time and money attempting to influence the attitudes of the electorate. One important aspect of our economic life is a deliberate and systematic attempt of the producers of goods and services to influence the attitudes of American consumers. In our social life, certainly, no internal national problem during the past decade has been as serious as that of the attitudes of our citizens toward racial concerns.

In addition, the very nature of our national character can be ascertained by a consideration of the attitudes of American citizens toward such diverse matters as health, marriage, law, sex, work, sports, education, labor, old age, religion, public welfare, pornography,

environment, the arts, and war. A belief in the vital importance of attitudes is based on the prevailing view in our society that attitudes determine behavior (Nettler and Golding, 1946; Defleur and Westie, 1958; Sherif and Hovland, 1961; Bem, 1970). In fact, it is only from behavior that it can be inferred that an individual has an attitude. A sizeable body of literature indicates that attitudes are inferred from characteristic and consistent modes of behavior toward some class of object (Sherif, 1948; Hovland, Janis, and Kelley, 1953; Sherif and Sherif, 1956; Janis et al., 1959). In addition, almost all writers, regardless of their bias, agree that attitudes are not innate but rather are learned (Harris, 1950; Edwards, 1964; McGrath, 1964; Doob, 1967).

Because attitudes are learned and they determine behavior and because education is concerned with the learning and modification of behavior, attitudes and their development have definite relevance to education.

Stagner (1941), in the Encyclopedia of Educational Research, stated:

> Attitudes are basic to educational activities. Attitudes are also products of education; our progress toward democracy at home and international cooperation abroad will depend upon the attitudes developed in children at school.

Because attitudes are greatly influenced by environment, the schools can, and undeniably do, have a tremendous influence in developing attitudes in students.

This study was prompted by a growing conviction among educators that the attitude development of children in our schools is at least as important as their academic achievement. Many would agree with critics and experts A. S. Neill (1960), George Dennison (1969), Herb Kohl (1968), John Holt (1964), and Charles Silberman (1971), who emphasize the affective domain of a child's learning and view the school's role as necessarily providing an environment conducive to each child's total growth by stressing affective as well as cognitive development.

Importance of the Study

Fresh winds of change are stirring for today's restless children--and for the equally restless parents and teachers who have become more and more disillusioned with rigidities of traditional public school systems. This disillusionment has led to an increased emphasis upon changing the organizational pattern of the elementary school. During the sixties, an impressive array of new organizational patterns emerged. There is the nongraded school, the ungraded school, and the continuous progress program. Some elementary schools practice team teaching or cooperative teaching. There are multi-aged and multi-graded groupings. Then there are combinations: team teaching with nongraded, multi-aged nongraded, graded-team and multi-graded team arrangements. The basic assumption

behind these innovations is that it is impossible to organize a school without some method of grouping and with this, most agree. However, the question arises as to the best method of grouping in the elementary school, and on this point there seems to be little agreement. Therefore, it seems reasonable to assume that the search must continue.

This study was designed to further the quest for an effective method of elementary school organization. This study is important because:

1. It explores an area (multi-grade grouping) that has been largely neglected in the search for better methods of elementary school organization.
2. It explores the possible relationship between grouping in the elementary school and the attitude development of students, an idea which has been virtually ignored in educational research.
3. The need for further research on the effects of multi-grade grouping has been both directly and indirectly suggested by previous researchers and various educational writers.
4. The findings of this study should hold importance for various people concerned with the education of young children.

a. Elementary teachers--who need to understand possible ways to develop attitudes in children effectively.

b. Elementary principals--who play a leadership role in organizing learning experiences for children.

c. Parents--who are involved in the attitude development of their children.

d. Teacher training institutions--which are preparing elementary teachers who will undoubtedly teach in multi-graded schools.

The Problem

The purpose of this study is to determine whether there are differences in attitudes toward self, peers, and school of children in multi-graded classes as compared to those in single-graded classes in selected elementary schools.

Since at least three authors (Prescott, 1958; Funk and Cullers, 1970) believe that the way schools are organized has as important an influence on children's attitudes as does the curriculum, and since previous research appears to indicate that there is a possibility that multi-grading may indeed, promote social attitudes more effectively among elementary children than single-grading, it may be reasonable to assume that the type of

vertical organization in the school may influence the development of student attitudes. It is the aim of this study to try to find out if such an assumption is justified.

Hypotheses

The hypotheses tested in this study are:

Hypothesis 1:

Elementary students in multi-graded classes develop more positive attitudes toward self than students in single-graded classes as measured by the Coopersmith Self-Esteem Inventory.

Hypothesis 2:

Elementary students in multi-graded classes develop more positive attitudes toward their classroom peers than students in single-graded classes as measured by a sociometric questionnaire.

Hypothesis 3:

Elementary students in multi-graded classes develop more positive attitudes toward school than students in single-graded classes as measured by the Morse Pupil Attitude Questionnaire.

Background Theory Underlying the Study

Attitude Theory

Ostrom (1968) classified attitude theory into two major categories: learning-behavior theory and cognitive integration theory. The former draws upon principles resulting from the study of human and animal learning and may be subdivided into S-R theories and eclectic theories. The latter is based on an analysis of the individual's

phenomenal representation of his world and may be subdivided into consistency and motivational and non-motivational theories. The S-R theories correspond to applications of the mediating processes borrowed from specific learning-behavior theories, while the eclectic theories correspond to theories which borrow empirical principles and apply them by analogy to attitude responses. The subclasses of consistency and motivational and non-motivational separate cognitive integration theories into those which assume operation of a consistency principle, those which adopt an assumption of a motivation dynamic, and those which do not accept motivational constructs.

Because attitudes are difficult to describe objectively, let alone measure, they were relatively neglected in the teachings and writings of educational psychologists until the 1930's. In 1935, Allport, after considering over 100 definitions of attitude, concluded that most investigators agreed that:

> An attitude is a learned predisposition to respond to an object or class of objects in a consistently favorable or unfavorable way.

Katz (1962) classified attitudes into four categories: (1) utilitarian or adjustive; (2) ego defensive; (3) value expressive; and (4) knowledge based. The utilitarian attitude comes into play as the beholder designates to it a useful purpose in the completion of an end or goal. The effectiveness of this attitude comes

with the individual perception as to the reward, goal, or punishment. The ego defensive guards the individual from the internal influence of the self and the extreme external forces of the environment. This defends the personality from severe inner or outer pressures. The value expressive is the mercantile area which helps defend the self-concept and shapes it to a personal satisfaction. The knowledge based lends stability to the individual as he studies standards and reference frames. It provides consistency and gives meaning to what would otherwise be an unorganized chaotic universe.

That attitudes determine behavior was indicated by previous references to supporting research. The dynamics of this causal relationship between attitudes and behavior have been analyzed by several researchers, notably Lewin, Doob, Rokeach, and Thomas and Znaniecki.

According to Lewin (1951), attitudes are imbedded in a cognitive context, with affective and cognitive structures operating in an interdependent fashion to determine behavior.

Doob (1967) viewed attitude as an anticipatory or antidating implicit response which mediates the individual's overt responses.

Rokeach (1968) took the position that behavior is a function of the interaction between two attitudes--attitude toward object and attitude toward situation.

The earlier conclusions of Thomas and Znaniecki (1918-20) were that behavior is the result of the interactions between "attitude" and "definition of the situation."

As previously cited references indicate, attitudes are learned rather than innate. They are developed in the intricate networks of contacts the child has with other persons, with his own performances, and with the environment, both natural and cultural.

Sherif and Sherif (1965) stated:

> To say that attitudes are learned implies neither mechanical imprinting nor formal instruction, necessarily. From early childhood, an integral part of an individual's interaction with adults and with other children important in his eyes is labeling the objects, persons, events, and groups he encounters in approving, disapproving or other affective tones.

That student attitudes affect student learning is readily apparent to most modern educators. Psychologist, C. R. Mill (1960), stated that a student's attitudes determine not only what he learns, but also, how and why he learns. Witty (1948) believed that children often fail in school even when they have plenty of mental ability and favorable opportunities for success because their attitudes are unfavorable.

Although there is some evidence that attitudes can be taught directly (Howard, 1951; Ojemann, 1956), students cannot always be approached directly in

developing attitudes. Rather, attitudes seem to be caught as well as taught (Foshay and Wann, 1954). That is, the influence of the school seems more indirect through interaction with peers and teachers as well as accompanying the acquisition of specific skills, habits, and learnings (Clardy, 1967).

Most current theoretical treatments of attitude divide it into three components: affects (or emotions), cognitions (or beliefs), and action tendencies (Rosenberg et al., 1960; Greenwald, 1968). The following definition by Smith, Bruner, and White (1960) is of this type and is accepted for the purposes of this study.

> An attitude is a predisposition to experience, to be motivated by, and to act toward a class of objects in a predictable manner.

Multi-Grade Grouping Background

In multi-grade grouping, each class in an elementary school is composed of students from more than one, usually three, grade levels.

According to Franklin (1967), it is a vertical administrative arrangement that:

> Groups students on the basis of differences rather than on similarities.
> Provides flexibility for the students.
> Requires greater differentiation of instruction.

Multi-grade classes are composed of students of several ages, abilities, interests, and grades. In such

a situation, therefore, the teacher is forced to see each child as uniquely different from every other child in the class.

A primary multi-graded class has approximately an equal number of first, second, and third grade children. An intermediate multi-graded class has approximately an equal number of fourth, fifth, and sixth graders. Usually, students are not identified by any standard grade level, however, it is also possible for each student to consider himself in a specific grade while also a member of a class that has one or two other grade levels. Multi-grade grouping, sometimes called interage or intergrade or multi-age grouping, is based on the assumption that students are better off when they are grouped on the basis of differences rather than on similarities. Frequently, the plan operates within the framework of a graded system in that it retains grade labels, but these designations are almost entirely for administrative and record keeping purposes. Grouping within each classroom, however, cuts across grade and age lines. Within the class, students move from one grade level to another in subject matter. Multi-grading, therefore, becomes a facilitating arrangement and the plan focuses on the needs of the learner rather than on grade level standards.

A student begins in a multi-graded class as one of the youngest students. The second year he is in the

middle group and the last year he is one of the oldest. It is held that the psychological process of socialization and identification are facilitated by such an arrangement because the fact that children learn from one another is capitalized upon and legitimized; and many children learn through what Howard (1951) called "environmental absorption." Ties of affection and admiration for older students and protective attitudes toward younger ones are said to develop which extend attitudes toward peers.

Norin (1968) in commenting on the social component of multi-grade grouping stated:

> In addition to assisting the teacher to conceptualize the diversity in his class, the multi-age group has certain side advantages in that children have an opportunity to interact with a group that is similar to the group they socialize with outside of school.

Lane and Beauchamp (1955) questioned the age-grade concept which implies that twelve months is the optimum age span for a school group. They pointed out that play groups of children encompass three to five years presenting individual children with a much wider range of social identification and that furthermore, the typical age-grade grouping of one year, found in graded schools, breaks down after the individual completes his formal education and finds himself working in a group representing a wide age range. They further recommended that:

> Groups [should] be established with a wide range of ages, cutting across several grade lines, so that classes will more nearly resemble the groups in which

people usually find themselves and in which many levels of maturity are usually represented.

While the described social interaction is taking place, proponents of multi-grading point out that each student is working on subject matter at his level of ability regardless of its grade level, and thus conceivably, is strengthening his self-concept.

Theoretically, in a multi-graded group, the membership of two-thirds of the group is the same each year in a class with three grades. The older third moves on to another class, and a new third joins the group. In some schools the teacher spends more than one year with each class, and so he has a better opportunity, presumably, to become familiar with the children and their needs than under more traditional single-graded plans.

A review of the literature on modern day grouping practices, indicates that the use of multi-grade grouping has been rather limited in this country; however, with the rapid spread of the ungraded school concept, future opportunities for experimentation in multi-grade grouping should be enhanced. Thus, as more research information becomes available in the area of pupil grouping and learning, the possibilities for individual progress of pupils will be strengthened.

Definition of Terms

Unless otherwise stated at the point of usage, for the purposes of this study, the following terms will be employed as defined below.

Attitude--those general cognitions and associated feelings an individual holds toward an object or class of objects which predispose him to behave in a particular way.

Positive attitude--those general cognitions and associated feelings of acceptance an individual holds toward an object or class of objects.

Negative attitude--those general cognitions and associated feelings of rejection an individual holds toward an object or class of objects.

Attitude toward self--those general cognitions and associated feelings, both positive and negative, that an individual holds regarding an abstraction that he develops about the attributes, capacities, objects, and activities which he possesses and pursues. This abstraction is represented by the symbol "me" which is a person's idea of himself to himself.

Self-concept--a term used interchangeably with "attitude toward self" and "self-esteem."

Self-esteem--a term used interchangeably with "attitude toward self" and "self-concept."

Attitude toward peers--those general cognitions and associated feelings, both positive and negative, that an individual holds toward other students with whom he comes in contact in the school setting.

Attitude toward school--those general cognitions and associated feelings, both positive and negative, that an individual holds toward aspects of the environment in which his formal education takes place.

Multi-grade classes--groups which are comprised of children from two or more grade levels in a single classroom.

Multi-age classes--a term used interchangeably with "multi-grade classes," "interage classes," and "intergrade classes."

Interage classes--a term used interchangeably with "multi-grade classes," "multi-age classes," and "intergrade classes."

Intergrade classes--a term used interchangeably with "multi-grade classes," "multi-age classes," and "interage classes."

Single-grade classes--groups which are comprised of children from only one grade level in a single classroom.

Assumptions Underlying the Study

The assumptions underlying this study are:

1. Attitudes play an important role in determining behavior.

2. Attitudes are not innate, but rather, are learned.

3. Attitudes are fairly well established during the first ten years of life.

4. Attitudes may be positive or negative as defined under "Definition of Terms."

5. Attitudes are positive or negative in a social context.

6. Some attitudes are learned more effectively in some situations than others.

7. The variable of the quality or type of instruction provided to each group of students tested is assumed to have a definite influence on the results of this study. However, since there is no practical way to measure this variable and since all groups tested were rated at or above grade

level standards in academic achievement by their teachers and principals, it is assumed that the quality of instruction in all groups tested was essentially equal. (In addition, the research design provided statistically for the randomizing of the effect of this variable.)

8. The instruments utilized in the study are adequate for the measurements made.

Limitations of the Study

The limitations of this study are listed as follows:

1. Time Limitation. It is recognized that attitudes are subject to change; therefore, the attitudes of each child reported in this study are the concept of that particular individual at the moment that he was tested. However, since the errors of measurement of attitudes vary in both directions rather than being constant, they are, therefore, likely in effect to be cancelled.

2. Sampling Limitation. This investigation was confined to a study of middle-class, predominately white, high achieving 3rd and 5th grade children enrolled in five elementary schools in Genesee County, Michigan. It is suggested that the

interpretation of results of this study be considered in relation to the specific population investigated. For other school situations, the conclusions of this study may serve as hypotheses for continued study.

3. Methodological Limitation. There is a methodological limitation in this study in that the assessment of children's attitudes is further limited to those aspects which can be measured by the specific instruments used. Pencil and paper tests, at best, reveal only what the individual is able and willing to communicate. The attitudes, then, as related to this study, are simply the description which each child chose to reveal to the investigator. However, the instruments selected for use measure percepts significant to children at the 3rd and 5th grade levels.

4. Language Limitation. There is a semantic limitation which is closely related to methodology. Attitudes are not easily definable in words; they are only partially available to awareness and verbal communication. It is recognized that in this complex area of human behavior, 3rd and 5th grade students may experience difficulty in

revealing factually what they in reality feel and believe about themselves. This limitation imposed by communication difficulties makes precision in measurement more difficult.

5. Maturity Limitation. There is a limitation imposed by maturation of the children tested. Methodological and semantic limitations may be applicable at any period of human development since instruments are inadequate and communications imperfect. But further limitations are compounded in this study by the fact that many attitudes are still in the process of being formed and this process itself may impose limitations.

Organization of the Report

Chapter I has provided the background of theory, significance, purpose, hypotheses, definition of terms, assumptions, and limitations of the study.

Chapter II reviews the research and literature which is related to the study. It includes investigations of multi-grade grouping and studies of the attitudes of elementary students toward self, peers and school.

Chapter III describes the general research design, population, instruments used, and procedures followed in the study.

Chapter IV contains an analysis of the data and a summary of the research findings.

Chapter V presents a summary of the study, conclusions, and implications based on the results of the study.

CHAPTER II

REVIEW OF RESEARCH AND RELATED LITERATURE

The purpose of this chapter is to examine selected literature and research pertaining to:

Multi-Grade Grouping in the Elementary School,

Attitudes of Elementary Students Toward Self,

Attitudes of Elementary Students Toward Peers,

Attitudes of Elementary Students Toward School.

Multi-Grade Grouping in the Elementary School

In Chapter I, multi-grade grouping was defined and described. In this chapter, consideration will be given to the history of multi-grade grouping as well as a review of research and related literature.

History of Multi-Grade Grouping

Previous to 1848, when the grading of American schools began, both the district schools of the eighteenth century and the dame schools of the seventeenth were without grade classification. In both types of schools, children as young as three associated with children as old as ten,

each child receiving twenty minutes or so of individualized instruction perhaps twice daily.

Rural schools in America have long practiced multi-grade grouping. True, this has been more out of necessity, rather than because of a deliberate choice or philosophical base. According to Goodlad and Anderson (1963):

> At its best, and under the management of an excellent teacher, the small rural school with its wide age range and limited enrollment has had certain real advantages insofar as grouping and other organizational practices are concerned.

A United States Office of Education bulletin by Bathurst and Franseth (1951) aimed at helping teachers to organize classrooms containing children from grades one through six or eight by cutting across grade lines, illustrates this claim. Although for excellent reasons the small rural school is disappearing from the American scene, hundreds of rural teachers have in effect successfully operated multi-graded classrooms for a significant length of time.

In recent years, there has been considerable interest in multi-grade or interage grouping of children in elementary classrooms, although a 1960 United States Office of Education survey revealed that only between 2 and 3 percent of the elementary schools surveyed in the nation were actually using a multi-graded plan of organization at that time.

The educational literature since 1950 has generally viewed multi-grade grouping with favor. Hamalainen (1950), in advocating multi-age grouping, contended that:

> A heterogeneous group helps provide a more normal social situation for children of elementary school age. It encourages an atmosphere of varied and diverse abilities. In this way the educational experience of each child becomes more wholesome. He better realizes the contributions others different from him, can make to the world's work.

Stratemeyer (1957) stated that interage grouping may offer the special stimulation which some students need and that this break with the traditional pattern of grouping could permit more freedom for the learner and greater flexibility in curriculum.

Carlson (1958) analyzed the factors necessary for the best education in the elementary school and concluded that:

> Interage grouping is one of the most successful systems yet devised for grouping young children.

Although he recognized that interage grouping will not guarantee a good educational program, he believed that a teacher will tend to perform better in such a program since the nature of this type of grouping serves to encourage the teacher to put forth his best efforts in meeting the individual needs and abilities of children.

Lane (1964) in recommending what he considered to be an ideal school organization plan, described a multi-graded model.

Woolfson (1967) recommended multi-age heterogeneous grouping as a method to encourage individualization of instruction. She maintained that individualization can take place better with multi-grading because it:

> . . . encourages teachers to move away from the idea of a predetermined, sequential curriculum that is relatively the same for all children in the class; helps teachers see children as individuals; and, removes unnecessary restrictions on the level and direction of children's learning.

In making predictions concerning teaching, learning, and grouping, Drummond (1963) predicted that multi-grade grouping will become much more widespread in the future due to the results of research on theories of learning and teaching.

Advocating a school program that provides for optimum individual development, Otto (1964) recommended that:

> . . . every school should have a variety of avenues through which multiple-age and multiple-grade groupings can take place.

Featherstone (1967) described the "family" or vertical grouping in the British Infant schools he had observed.

> In these schools, each class is a cross-section of the whole school's population, all ages mixed together. This seems particularly successful in the early school years, when newcomers are easily absorbed, and older children help teach the young ones.

A follow-up study of the multi-graded plan of Torrance, California (described later in this chapter), led Hull (1958) to the conclusion that pupil progress was so enhanced that there is something inherent in this plan of grouping that educators should consider in all school organization. He reported that a three-year survey of pupil progress indicated that learning in multi-graded classrooms, as measured by tests then available, was definitely superior to the single-graded classroom. Hull favored multi-grade teaching as it, in his opinion, enables better timing of instruction, especially in the teaching of reading.

Stating their combined personal preference, Goodlad and Anderson (1963) stated that:

> . . . the most desirable pattern of class organization is one in which both the nongraded concept and the multi-age grouping concept are central.

Studies of Multi-Grade Grouping

A comprehensive search through the educational literature dealing with grouping at the elementary level as well as computer searches by both DATRIX* and

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*DATRIX (Direct Access to Reference Information): A service of Xerox Company which upon request makes a computerized search of University Microfilms' dissertation files which contain 95 percent of all dissertations recently written at United States and Canadian universities, as well as thousands written since 1928.

SDV/ERIC* of work published through August, 1972, revealed that relatively little research has been done on the effects of multi-grade grouping on pupil attitudes in the elementary school. Most of the research concerning multi-grade grouping has concentrated, understandably, on comparing the academic achievement of students in multi-graded classes with that of students in single-graded classes. With the exception of one study, it would appear that measurement of student attitudes has been of secondary importance. Of the total of six studies which have investigated multi-grade grouping, only three have attempted to assess student attitudes.

The Torrance program was begun in 1955 in the Torrance Unified School District of Torrance, California, as a deliberate attempt to explore the characteristics of multi-grade grouping. Rehwoldt (1957) reported the results of the study which was designed to analyze the effects of multi-grade grouping in the areas of academic achievement, personal adjustment, attitudes toward school and peers. No objective measurements of student attitudes were obtained. Rather, attitudes toward school and peers were determined by subjective reports based on teacher observation and appraisal. The conclusions were that students in the seven multi-graded classes appeared to

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*SDV/ERIC: A service of Systems Development Corporation which upon request makes a computerized search of all articles published since 1966 in both the Current Research in Education index and entries in the Current Index to Journals in Education.

develop better attitudes toward school and peers than did the single-graded students with which they were compared.

A study conducted in Chattanooga and surrounding Hamilton County public schools was reported by Chace (1961). Students in three multi-graded classes were matched on the basis of the grade, sex, age, and I.Q. of the student; the professional preparation and teaching experience of the teacher; and the socio-economic status of the school, with students in single-graded classes. Their growth was measured in the areas of academic achievement. In addition, the California Test of Personality was administered and students were compared on the various sub-tests of that instrument.

The one sub-test of the California Test of Personality having relevance for the present study was that of school relations. The conclusions were that children in the multi-graded group tended to have a very slightly more favorable attitude toward school, although the difference lacked statistical significance.

Of particular relevance for the present study is the investigation conducted by Junell (1970) to determine whether twelve non-cognitive behaviors among junior high school students had been differentially affected by their elementary school backgrounds--one single-graded, the other multi-graded. Fifty-four students with multi-graded elementary school experience were compared with

ninety-six students with single-graded elementary school experience, both groups attending the same junior high school in Bellevue, Washington.

An especially designed identification scale was used to measure the two variables of Self-Direction and Leadership, and three standardized instruments were administered to measure the other ten variables: "Index of Adjustment and Values," "Utah State University School Inventory," and "The California Test of Personality."

The most notable result of this study was that the data generally indicated that multi-grading was more favorable for boys than it was for girls. Conclusions about ten of the variables were based entirely on the individual scores from the ten sub-tests of the three standardized instruments administered. Taking each group as a whole, no significant differences were found for Peer Relations, however, a statistically significant difference for Attitude Toward School was found which favored the multi-graded group. In addition, although there was a slight trend favoring the multi-graded group for Concept of Self, the difference lacked significance.

Summary of Research Findings

From this review of research and related literature dealing with multi-grade grouping in the elementary school, it can be seen that multi-grade grouping has been viewed generally with favor. In addition, although there is some

indication from previous studies that attitudes of elementary students toward school and peers may be more positive in multi-graded classes than in single-graded classes, the rather limited research has not been entirely conclusive. Furthermore, to date, only one research study (Junell, 1970) has been reported that examines the effects of multi-grade grouping upon the self-concepts of students, but the study was conducted with students of junior high school age and reported inconclusive results.

Attitudes of Elementary Students Toward Self

Kelley (1962) saw the self as the key to the development of the "fully functioning person." Jersild (1952) related the self-concept to mental health. A statement by Combs (1962) indicates the vital importance of the self-concept:

> A positive view of self gives its owner a tremendous advantage in dealing with life. It provides the basis for great personal strength. Feeling positively about themselves, adequate persons can meet life expecting to be successful. Because they expect success, they behave, what is more, in ways that tend to bring it about.

Modern Theory of Self

The modern theoretical framework for a concept of self is generally attributed to George H. Mead. Mead (1934) made the concept of self a major part of his

theoretical writing on the philosophy of society and described in detail how the self is developed through interactions with the environment. He argued that personality, rather than being anchored on biological variables was determined by social-psychological factors.

Lewin (1935) viewed the self as a central and relatively permanent organization which gave consistency to the entire personality.

Throughout his career, Gordon Allport (1937, 1943, 1955, 1966) emphasized the importance of self in contemporary psychology and argued for a purposeful, rational man, aware of himself and controlling his future through his aspirations.

Goldstein (1939) analyzed the processes of self-actualization, as contrasted with those of the sick organism which must constantly worry about bodily preservation. This was a forerunner of the comprehensive work of Maslow (1954, 1956, 1962) who has written so powerfully on self-actualization. In 1962 he listed thirty-nine propositions of growth and self-actualization. In these he outlined the raw materials, both physiological and psychological that provide the inner nature, the needs, capacities, and anatomical equipment that influence the development of the self.

The term "self-concept" was introduced in its most wide-spread usage by Raimy (1943) who said of it:

> The self-concept is the more or less organized perceptual object resulting from present and past self observation . . . [it is] what a person believes about himself. The self-concept is the map which each person consults in order to understand himself, especially during moments of crises or choice.

In a series of articles, books, and lectures, Carl Rogers (1947; 1951; 1954; 1959a, b; 1961; 1962; 1967; 1969) presented a system of psychotherapy called "non-directive," which was built around the importance of the self in human adjustment. In Rogers' theory, the self is the central aspect of personality. Rogers described the self as a social product, developing out of interpersonal relationships and striving for consistency. Rogers' system went far towards linking together earlier notions about the self. In fact, his impact was so great that his general approach soon became known as "self theory."

Another primary influence on the concept of the self in psychology and especially in education and the other helping professions, was the writing of Combs and Snygg. In their 1949 book, Individual Behavior (2nd edition, 1959), they proposed that the basic drive of the individual is the maintenance and enhancement of the self. They further declared that all behavior, without exception, is dependent upon the individual's personal frame of reference. In other words, behavior is determined by the totality of experience of which an individual

is aware at an instant of action, his "phenomenal field." Combs and Snygg's insistence on giving major importance to the ways in which people see themselves and their worlds was a significant contribution and has greatly influenced modern educators.

Studies of the Self-Concept of Elementary Students

A review of the literature conducted by Strong and Feder (1961) revelaed that at least fifteen different instruments have been devised within the past few years to measure some form of an individual's concept of himself. Some of the efforts to correlate findings involving two or more of the instruments indicate the possibility that essentially the same elements of personality may be measured by several of these instruments.

Ruth Wylie (1961) has conducted the most extensive review of research in the area of self-concept. She divided the studies dealing with self-concept into two major categories: those relating to phenomenal self and those relating to nonphenomenal or unconscious self. Although optimistic about the possibilities of research into the self-concept, she was pessimistic over the general quality of the work done up to that time.

Of the 243+ studies relating to both phenomenal and nonphenomenal self-concept reviewed in Wylie's survey, only 14 studies dealt with research into the

self-concept of elementary school students. Most studies have focused on secondary school and college age students. Only recently has there been a concerted effort to research this subject at the elementary school level and most of the more recent investigations have centered on the disadvantaged child.

Interest in the area of self-concept is illustrated by the studies undertaken by the U.S. Office of Education through research grants to outstanding scholars of self-concept and self-perception. Two of these studies dealt with elementary age children. First, Joseph Bledsoe (1961) was concerned with the self-concepts of fourth and sixth grade boys and girls in relation to intelligence, academic achievement, interests, and manifest anxiety. His study reported significant differences in mean self-concept scores of boys and girls at those grade levels and would seem to indicate that at fourth and sixth grade levels girls have higher self-concepts than boys. These findings are in general agreement with those reported by previous investigations (Ausubel et al., 1955; Davidson et al., 1958; Sarason et al., 1958).

In a second study sponsored by the U.S. Office of Education, Combs and Soper (1963) investigated the relationship of children's perceptions to achievement and behavior in the early school years. To accomplish this, behavioral and perceptual data were collected for

children in two laboratory school classes over a three-year period as they progressed from kindergarten into the second grade. Conclusions were that:

> A feeling of personal adequacy seems to have an all-pervasive importance in the child's perceptual organization . . . in this research the feeling of adequacy is, in general, positively correlated with desirable adjustment and behavior.

Ketcham and Morse (1965) reported some interesting findings in a longitudinal investigation. They used the Coopersmith Self-Esteem Inventory to measure changes in students' self-concept as they progressed through school. They reported that third graders had the highest mean self-concept scores and that measured self-concept gradually declined in later grades.

Coopersmith (1959) found that indicated self-concept declines to its lowest mean scores in the fifth grade, while Morse (1964) reported the nadir of reported self-concept is found in the mean scores of seventh grade students.

There seems to be an increasing quantity of research and literature examining the significance of self-concept for school achievement. This is probably because educators are constantly faced with the puzzling question of why many students with high aptitudes do not attain scholastic records commensurate with their abilities.

Combs (1962) hypothesized that adequate, self-actualizing persons seem to be characterized by an essentially positive view of self. They see themselves as persons who are liked, wanted, acceptable, able; as persons of dignity and integrity, of worth and importance, and as a result they will behave in a manner which will bring about success in dealing with life. On the other hand, a person with an inadequate self-concept will feel unable, unliked, unwanted, unworthy, and unimportant, and he will behave in a manner which will not lead to success.

Several studies have been made at the elementary level which showed that achievers have a more adequate self-concept than do underachievers. Sears and Sherman (1964) completed a study which attempted to gain an understanding of how children's feelings of self-esteem develop in the school setting. The study used a case study method for eight children in the fifth and sixth grades. The study was concerned with the factors that influence self-esteem, and in turn how it influences the motivation of children in their learning and achievement. This study indicated that there is a significant relationship between positive feelings of self and academic achievement.

Using a sample of elementary school children, Reeder (1955) found that students with low self-esteem achieve lower in comparison to their potential and are

more frequently classified as having problem behavior than pupils with a high self-concept.

There is some evidence to suggest that a student's performance in task-oriented situations is influenced by his concept of self. Roth (1959), investigating the role of self-concept as it relates to achievement concluded:

> . . . in terms of their conception of self, individuals have a definite investment to perform as they do. With all things being equal, those who do not achieve choose to do so.

Barber (1952) found that pupils assigned to a remedial reading class at the elementary level were excessively anxious about themselves and their relationships with other people.

In another study, Lumpkin (1959) compared fifth grade underachievers and overachievers in reading, matched for sex, mental age, chronological age, and home environment. The overachievers were found to exhibit significantly more positive self-concepts.

In a study designed to determine the relationship between immature self-concept and reading ability, Bodwin (1957) studied one group of pupils with reading disabilities, another group with arithmetic disabilities, and a third group with no apparent educational disabilities. Significant positive correlations of .72 at the third grade level and .62 at the sixth grade level

were found between immature self-concept and reading disability. Significant positive correlations were also found between immature self-concept and arithmetic disability (.72 at the third grade level and .68 at the sixth grade level).

In a study to determine whether a relationship existed between self-concept and scholastic achievement across grades, Bruck (1957) compared self-concept measures of pupils from the third to the sixth grades in three public elementary schools and of pupils in the eleventh grade of a senior high school. Significant correlations between self-concept and grade point averages were found irrespective of grade level. The results of this study were supported by an investigation by Hamachek (1961), who found high achievement and self-perception of academic competence to be related to reading age of pupils in a university laboratory school. Seay (1960) also found that changes in self-concept were positively correlated with success or failure experiences in a remedial reading program for boys who were considered to possess normal intelligence but who had a reading disability.

White (1963) conducted a study which attempted to gain insights into the relationship between children's self-concept and their academic achievement. She concluded that, "Academic achievement is in general harmony

with concept of self. Lack of confidence in self seems to take away one's "can-ness.'"

Further evidence is reported by Coopersmith (1967) who found a correlation of .36 between positive self-concept and school achievement in a group of 102 fifth and sixth grade children. Coopersmith also reports that sex differences were not significant for this age group. On a test-retest basis (five-week interval) the reliability for his instrument for measuring self-concept was .88.

In a study to determine whether poor self-concept or reading disability was the antecedent condition, Wettenberg and Clifford (1964) obtained mental ability and self-concept measures of kindergarten children in their first term of school. Measures of progress in reading and self-concept measures of the same pupils were obtained two and a half years later. It was found that the self-concept measure in kindergarten significantly predicted progress in reading while the mental test scores did not. Feelings of competence and feelings of personal worth were the two most powerful components of the self-concept measure.

Lavin (1965) found that the high achiever is more likely to have a positive self-image. This research also suggested that the high achiever has greater cognitive flexibility, is less hostile, and is less defensive about revealing personal inadequacy than is the low achiever.

Similarly, Farls (1967) studied intermediate grade students and found that high achieving boys and girls reported significantly higher self-concepts in general and self-concepts as students than low achieving boys and girls.

In 1967, Davidson and Greenberg investigated successful learners among lower class children and the correlates of school achievement within this group. On three different and distinct aspects of the self--Personal competence, Academic competence, and Social competence--the higher achievers rated significantly better than did the low achievers.

In a similar study, Williams and Cole (1968) explored the relationship between the self-concepts and school adjustment of eighty sixth grade students, and found significant positive correlations between their self-concepts and such variables as reading and mathematical achievement.

Several recent studies have found self-concept to be significantly related to academic achievement for disadvantaged as well as other elementary students.

Campbell (1965) used the Coopersmith Self-Esteem Inventory to measure the self-concepts of middle grade children in inner-city elementary schools. His study supports a positive relationship between self-concept and achievement.

Meyers (1966) conducted a study in Harlem, using forty-six Negro boys in the fourth, fifth, and sixth grades. She found that the boys with more positive self-concrpts were higher achievers than those with more negative self-concepts.

Using sixty children from the intermediate grades of each of the elementary schools in a city in New Jersey, Caplin (1969) found that the children, both white and Negro, attending defacto segregated schools had less positive self-concepts than did children attending desegregated schools. He also found that the children having more positive self-concepts had higher academic achievement.

Using the Self Esteem Scale developed by Rosenberg (1965), Frerichs (1970) found that there is a positive correlation between self-esteem and academic achievement for inner-city black children.

Another body of research into the area of self-concept has postulated a low self-concept for minority group children based on considerations of ethnic caste as well as socioeconomic class (Ausubel and Ausubel, 1963; Clark, 1963; Pettigrew, 1964; Kvaraceus, 1965; Erickson, 1966). A low self-concept has generally been cited as one of the major characteristics of the disadvantaged (Gordon, 1965; Havighurst and Morefield, 1967). Out of this assumption has come the belief that the schools have

a fundamental responsibility to enhance the self-concepts of disadvantaged children and this objective has been prescribed and described for virtually all programs for the disadvantaged (Grambs, 1965; Gordon and Wilkerson, 1966; Smiley, 1967; Fantini and Weinstein, 1968).

However, the findings concerning the self-concept of disadvantaged children seem equivocal and inconclusive. That is, on the one hand several studies involving elementary children did find a significantly higher mean self-concept for white children than for disadvantaged Negro children (Keller, 1963; Henton, 1964; Radke-Yarrow, 1965; Deutsch, 1967; Lansman, 1968; Long and Henderson, 1968).

However, a growing body of more recent research indicates that there is no significant difference between the self-concepts of Negro and white students (Wylie, 1963; Gibby and Gabler, 1967; McDaniel, 1967; Yeatts, 1967; Carpenter and Busse, 1969; Henderson et al., 1969; Zirkel and Green, 1971). Extensive studies by Kerensky (1967), Whitt (1966), and Carter (1968), also question the commonly held assumption that disadvantaged children have negative self-concepts.

There is some evidence that the self-concepts of Negro children may even surpass those of Caucasian children. Zirkel and Moses (1971) found the self-concepts of Negro fifth and sixth graders to surpass, although not

significantly, those of white children in the same classes. Soares and Soares (1969; 1970a, b), and Trowbridge (1970), in several studies involving elementary school students, found the mean self-concept of disadvantaged (predominantly non-white) students to consistently surpass that of non-disadvantaged (predominantly white) students.

Findings involving elementary students from other minority groups are much less numerous but somewhat similar. Among Spanish-speaking students, Mexican-Americans have received the most attention in this area of research. McDaniel (1967) found the mean self-concept of Mexican-American children to be significantly below that of white but not that of Negro children. Palomares and Cummins (1968), and Hishiki (1969) also found evidences of depressed self-concepts for Mexican-American children.

On the other hand, Najmi (1962) and Carter (1968) found no significant differences between the self-concepts of Mexican-American and white elementary children.

Zirkel and Moses (1971) found the average self-concept of Puerto Rican children to be significantly lower than that of both Negro and white students, but Zirkel and Greene (1971) found these significant differences to disappear when they used an observed report rather than a self-report instrument.

Withycombe (1970) found no significant difference between the self-concepts of American Indian and white

children. She found the self-concepts of Paiute Indian first and fifth graders to be related to ethnic group mixture in the school rather than ethnic group membership in society.

Judging by the available evidence of the more recent research into the self-concepts of disadvantaged children, it seems hazardous to assume that because of their socioeconomic circumstances they have lower self-concepts than children in better environments. It can be conjectured that there are students, particularly among the socially disadvantaged, who believe that they have the ability to succeed in school but who view school as irrelevant, threatening, or both.

Summary of Research Findings

In summary, it can be seen from this review of research studies of the self-concepts of elementary students that there is a persistent and significant relationship between the self-concept and academic achievement in the elementary school for both disadvantaged and other students. Studies have been presented that indicate that the successful student sees himself in generally positive terms and tends to excel in feelings of individual worth. It may be assumed that enhancing the self-concept is a vital influence in improving academic performance. Also, it would appear that no definite conclusions concerning the

adequacy of the self-concepts of disadvantaged children can be made. However, it is interesting to note that the studies reporting a lower self-concept for disadvantaged minority children have generally earlier dates than do the studies reporting the absence or reverse of such differences.

Attitudes of Elementary Students Toward Classroom Peers

People are an important part of the environment to which individuals react in the processes of developing and learning. Wrightstone, Justman and Robbins (1956) have asserted that:

> The development of one's personality is a product of the interaction of the individual with other people.

According to Otto (1954), it is in these person-to-person relationships in various sizes and types of groups that many social needs are met and personality development has its roots. The need to belong to a group is a powerful force. Some psychologists claim that this need is an innate human need while others maintain that it is culturally developed. All agree that, whatever its origin, the need to belong furnishes strong motivation for behavior, for in our society almost every individual attempts to become a member of some group.

Sullivan (1953) has stated:

> By the juvenile era, there is added the need for com-peers, as indispensable models for one's learning

> by trial and error; and this is then followed by a need for acceptance which is perhaps to most of you known by its reverse, the fear of ostracism, fear of being excluded from the accepted and significant group.

Cunningham et al. (1951) stated that:

> It is important for the development of most boys and girls of school age that they find belonging in groups of their peers.

Dineen and Gary (1955) expressed agreement with this statement in maintaining that:

> Chief among the factors necessary for developing a full life in a heterogeneous group such as a class of children is a satisfactory friendship pattern. When a child is with others who accept him and respond to him, that is, others with whom he wants to associate, he can contribute more and function better in the group.

Social adjustment has become of major importance in education. The alert teacher is aware of the need of children to establish and maintain emotional and social stability. Consequently, the study of classroom peer relationships is important.

The child in the classroom is part of a complex network of relations with other children in the group. Each child observes and evaluates the persons and events around him, responds with feelings of acceptance or rejection, acts in the situation, and is the recipient of actions of acceptance and/or rejection from others. Through such processes as these the role of the individual child becomes established in the group.

Historical Overview of Peer Group Research

Social scientific interest in and recognition of the importance of children's peer relations dates back at least to the turn of the century. One of the earlier and still significant theorists was Charles H. Cooley (1955), who as early as 1909, gave explicit recognition to the relevance of peer group processes in socialization and general societal functioning.

Terman's (1904) research on leadership and suggestibility in elementary school children examined qualities of leadership and stability of status within experimentally constituted groups.

Subsequent research on children's peer groups was more sociologically oriented and focused on the gang. This interest in gangs stemmed, in large part, from a concern for social amelioration. However, these studies clearly recognized the importance of the peer group as a socializing influence.

During the latter part of the 1920's, research interest in peer groups began to mount. Several studies are illustrative of contributions of this period. Hurlock (1927) presented experimental work showing the way in which group rivalry served as an incentive. Furfey (1927) reported on factors influencing boys' friendship choices, an area of inquiry that continues to remain of interest

today. Thrasher (1927) collected case histories and statistics on boys' gangs. He noted the occurrence of specialized roles, group cohesiveness, and the emergence of common codes in gangs.

During the 1930's, research on children's group processes clearly burgeoned. Hare, Borgatta and Bale's annotated bibliography (1955) of small group research lists more than five times as many references to children's groups in the period 1930 to 1939 than for the preceding decade. (A similar emphasis on children's groups did not hold true for the 1940's, undoubtedly because of research concerns related to the war.)

Along with the increase in volume of research during the 1930's, came an increase in sophistication of approach. Dorothy Thomas and her collaborators (1933) were among those whose efforts were channeled into devising suitable procedures for direct observation. About the same time, sociometric procedures became soundly established as a means for measuring acceptance within a group. Moreno (1934) introduced a technique for obtaining sociometric ratings which yield a picture of interpersonal relations within a group. Though ways of collecting and handling data have become increasingly sophisticated, these two approaches remain viable methods to the present day.

In the late 1930's, Lippitt and White (1947), under the guidance of Kurt Lewin, used experimental procedures to study the way variations in adult leadership affected individual and group behavior in clubs of eleven year old boys. This examination of reactions to "authoritarian," "democratic," and "laissez faire" leadership is a major landmark in small group research. This inquiry climaxed the early phases of research on children's peer relations and served as a transition point to the current era which commenced with 1950.

Studies of Correlates of Peer Acceptance

The review of research on attitudes towards peers which follows reports studies primarily involving elementary school students and covers only those initiated since 1950. In addition, since the present study used a sociometric measure, an attempt was made to select chiefly those studies of peer acceptance which also utilized sociometric techniques. The studies are grouped into three categories of correlates of peer acceptance:

Behavior and Personality Characteristics,

Mental Health,

Intelligence and Achievement.

Behavior and Personality Characteristics.--

Numerous research studies have demonstrated a significant

relationship between behavior and personality characteristics and social acceptance or rejection among elementary school children. Smith (1950) interviewed twenty-seven fourth grade boys and girls after they had indicated which classmates they liked best and least. According to the results of the interviews the best liked children were unselfish, impartial, considerate of others, and willing to share toys and books and to take turns. Those who were least liked by their classmates used harsh words and screaming voices, tended to bully others, and insisted on having their own way.

Tuddenham (1951) asked 1439 children in grades one, three, and five to supply names of their classmates to fit written descriptions of certain behavior and personality characteristics. He found that although the variables changed from grade to grade, the characteristics of being friendly and a good sport were consistently indicated for the most popular children at all three grade levels. Among boys at all levels the variables emphasizing athletic skill and dominance appeared to define the most valued and rewarded pattern of behavior. However, for girls, "acts like a little lady," "not quarrelsome," "quiet," were associated most significantly with popular rank at the third grade level, less so at first grade level, and not at all in grade five.

In studies at the first and second grade levels, Bonney (1955) and Bonney and Powell (1953) systematically observed the behavior of children with high and low sociometric status to determine how the social behavior of sociometrically high and sociometrically low children differed.

At the first grade level there was a significant difference between children of high and low sociometric status in five areas of social behavior. Those children with high sociometric status more frequently conformed to classroom requirements, smiled more often, participated more frequently in cooperative groups, made more voluntary contributions to the group, and associated with more children during free play and activity periods. In general these findings indicate that the highly chosen children were more active and flexible in their social relations than were those children with low sociometric status.

Similar results were reported for the second grade level. Children with high sociometric status were observed to talk more frequently, to laugh and giggle more, to participate more frequently in cooperative group activity, and to play with other children more frequently. Thus, as with the first grade children, those students with high sociometric status tended to be more socially active and to have more social relations with a larger

number of children than those students with low sociometric status.

In a study to determine some factors relating to the peer status of sixth and seventh grade children, Laughlin (1954) considered class membership, personality characteristics, mental ability, and academic achievement. Of these, personality characteristics were shown to have the most significant relationship with peer status. The traits especially admired by the children studied and attributed by them to those they liked were friendliness, likeableness, cheerfulness and enthusiasm. Children who were described as talkative and restless tended to have lower group social acceptance scores than their companions not so described.

Among behaviors and personality traits that correlate with social status in the classroom, hostility has been well linked to rejection. Thus, Schmidt's (1958) study indicated that sociometrically rejected boys and girls in fifth grade classrooms showed more aggressive behavior, and less cooperative behavior, than did sociometrically accepted children.

Lippitt and Gold (1959) found that the rejected children in the fourth through the sixth grade expressed less positive affect in their sociometric ratings of others and more often engaged in unfriendly behavior--either of the aggressive type or the passive-hostile type.

Gold (1958) reported a research study whose subjects were 152 boys and girls in grades kindergarten through six of a university laboratory school. Seventeen positive or desirable behaviors or personality traits valued by the children were grouped into four categories: social-emotional (friendliness, gentleness); expertness (being smart, good at games); coerciveness (being strong, knowing how to fight); and, associational (playing with others a lot). Each child, by means of a near-sociometric technique, rated his peers in terms of the behaviors in the four categories. Results revealed that the social-emotional traits proved to be the most important to all the children except the younger boys. No matter what the age group or sex of the child, and no matter what the trait or behavior, it was said more often to characterize the higher rated child than the lower rated child. Also, the more a behavior or trait was valued by the children, the more likely the high rated children were perceived as possessing that property.

"The Peer Nomination Inventory" was devised by Wiggins and Winder (1960) to measure aspects of social adjustment in preadolescent boys. The Inventory requires children to rate or to select the classmate best described by each of a series of words. Each item was carefully planned to represent one of four types of behavior thought to be related to social adjustment: aggression, dependency,

withdrawal, and depression. A number of additional items were designed to reflect popularity, friendship, and positive sociometric choice. When the instrument was administered to 710 boys in the fourth, fifth, and sixth grades it was found that all four areas of adjustment were negatively correlated with popularity. In other words, children rated by their peers as most popular were less likely to show aggression, dependency, depression, or withdrawal. Social intraversion (as indicated by depression) appeared to be more detrimental to social status than social assertiveness.

The investigation of peer group influence made by Kagan and Moss (1961) pointed to the potentially important role of social preference or popularity in the course of a child's development of an autonomous or passive disposition with others.

Guinouard and Rychlak (1962) administered a sociometric measure and a personality measure to 86 boys and 80 girls in grades six, seven, and eight to examine the relationship between personality traits and sociometrically determined popularity and unpopularity. They found that at each grade level unpopular children were less self-confident, less cheerful, less enthusiastic, less accepting of group standards, less conventional, and less concerned with social approval than popular children. Girls were found to be more warm and sociable, more enthusiastic and

happy-go-lucky, more esthetically sensitive, more insecure, and more tense and excitable than boys. Boys were found to be significantly more mature and calm, more aggressive, more adventurous, more individualistic, and more self-sufficient than girls.

Lorber (1966) conducted an investigation involving nine fifth and sixth grade classes, achieving below grade level in a low socioeconomic urban community. He reported that children who were socially unacceptable to their classmates tended to manifest poor behavior in the classroom characterized by disruptive, attention-seeking actions. Class members who were classified as having low social acceptance exhibited resentment toward group control; were rated as lacking self-control and as having temper outbursts in school; had difficulty getting along well with others; and were most often rated as over-aggressive and frequently fighting.

There is considerable consensus from the foregoing studies about the behaviors and personality traits that correlate with social status in the elementary classroom. However, one study was found which indicated contrary evidence. A study by Pope (1953) reported social class differences in behavior of peers that was valued. The lower class boys valued belligerence, strength, loyalty, friendliness, while middle class boys valued skill, activity, competition but not belligerence or dominance.

There were fewer social class differences among girls, both social classes valuing femininity ("the little lady"); but middle class girls placed a greater value on such traits as buoyancy and activity. Each of the elementary schools used in this study was homogeneous with respect to social class, and the contrasts Pope found were undoubtedly high-lighted by this fact.

In general, the bulk of the data indicate that high peer acceptance is awarded to the active, nonhostile, not overly dependent child, who is helpful to others or makes them feel comfortable in his presence; one who demonstrates a responsibility or dependability with respect to group goals and interpersonal relations, and who does not engage in behavior that disrupts the classroom.

Mental Health.--Closely related to behavior and personality characteristics is the area of mental health which has been the focus of interest by researchers of classroom social structure. Investigators have used such concepts as adjustment, anxiety, emotional handicap, and emotional disturbance. The key finding in this area is that position in the classroom social structure is significantly related to mental health.

Baron (1951) established the social acceptance of 220 girls from fifth and sixth grade classes by means of a sociometric test and determined their personal-social

characteristics by their responses to the "Mental Health Analysis."* He concluded that high social acceptance is apt to be associated with more adequate personal-social adjustment than is the case with either average or low classroom social status. In general, the high social acceptance group revealed little anxiety and depression while average and low status groups more frequently revealed the presence of such unfavorable feelings.

A personality test and a near-sociometric test were administered by Dahlke (1953) to children in grades two through eight. He reported that at all grade levels poorly adjusted children were rejected while well-adjusted children were chosen.

In a study by Davids and Parenti (1958), social acceptance was significantly associated with good emotional adjustment. In a group of emotionally disturbed elementary children it was found that the disliked children tended to be more emotionally disturbed than the ignored children. When the sociometric ratings of the disturbed class were compared to those of a normal class, a significantly higher number of mutual choices were found in the normal group.

Smith's (1958) data indicated a correlation of .47 between teacher nominations of adjusted and seriously

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*L. P. Thorpe et al., "Mental Health Analysis, Elementary Series, Form A (Los Angeles: California Test Bureau, 1946).

maladjusted sixth grade boys and sociometrically determined peer acceptance and rejection.

Bower's work (Bower, Tashnovian, and Larson, 1958; Bower, 1959; Bower, 1960) was primarily concerned with using a pupil-nomination device to assess mental health and to select children for referral. It was quite apparent in Bower's research that the child's mental health influenced his social role. For example, using a sociometric measure he devised called "Class Play," Bower found that the emotionally disturbed children were selected by their peers in the casting of a school play to take the roles reflecting social inadequacy and hostility.

Commoss (1962) compared twenty second graders who scored in the highest quarter of their classes on a sociometric test with twenty second graders in the lowest quarter. She found that rejected children tended to exhibit behavior symptoms usually associated with poor mental health. They were overly aggressive or withdrawn, listless and in poor physical health, and emotionally unstable.

Cowen and his associates (1966), in evaluating a three year program designed for the early detection and prevention of mental disorders, contrasted third grade children in two comparable schools on the basis of school record and adjustment measures. They found that children

who had been identified early in their school careers as having manifest or incipient adjustment problems were less well rated by their peers for acceptability.

Using a sociometric measure, Vacc (1968) compared the peer acceptance of a group of emotionally disturbed and a group of normal elementary children. The following results were reported.

1. The percentage of stars was greatest among the normal group.
2. The percentage of rejectees was greatest among the emotionally disturbed group.
3. The percentage of isolates was also greatest among the emotionally disturbed group.

Among the variables studied by researchers, anxiety has been commonly observed to be related to peer status. Sociometric techniques and "The Children's Form of the Manifest Anxiety Scale"* were used with fourth, fifth, and sixth grade children by McCandless, Castaneda, and Palermo (1956). They reported that more anxious children were less popular. This relationship was high for fifth graders, moderate for fourth graders, and approximately zero for sixth graders.

Horowitz (1962) administered "The Children's Form of the Manifest Anxiety Scale,"* "The Children's Self-Concept Scale,"** and an informal sociometric measure to

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*A. Castaneda, B. McCandless, and D. Palermo, "The Children's Form of the Manifest Anxiety Scale," Child Development, XXVII (1956), 327-33.

**E. V. Piers, and D. B. Harris, "Age and Other Correlates of Self-Concept in Children," Journal of Educational Psychology, LV (1964), 91-95.

111 fourth, fifth, and sixth grade children and reported a significant positive relationship between anxiety and social rejection. In addition, the anxious children in her sample were less frequently chosen by either sex.

Hill (1963) obtained strong relationships between cross-sex sociometric status and measures of test anxiety and defensiveness. In comparison with others, anxious and defensive children more frequently reported that they wished to play with peers of the opposite sex.

Contrary to the foregoing researchers who suggested that the relationship between peer acceptance and mental health was quite stable and existed in most cases studied, Saunders (1970) and Saunders and DiTullio (1972) indicated that the relationship was not that clearly defined. Saunders (1970) attempted to determine whether the relationship between emotional disturbance and social position within the non-graded classroom is similar to the relationship that has been reported by previous researchers for self-contained classes. Namely, the greater the child's adjustment, the higher his social acceptance and the greater the child's maladjustment, the lower his social acceptance. Children in the sample were 333 students from grades three, four, five, and six. They were tested both on behavior rating scales and social acceptance scales. Results showed correlations between social position and emotional disturbance in only five of the twelve

classrooms. Saunders concluded that the relationship between classroom structure and mental health reported by previous researchers does not necessarily exist within the non-graded classroom.

Further evidence was provided in the study of children in grades three through six by Saunders and DiTullio (1972). They found a significant positive relationship between peer acceptance and mental health in only seven out of nine self-contained classes studied. In addition to the instability of the relationship as positively correlated in all cases, in one third grade class a significantly negative correlation was observed, i.e., the more disturbed children were the most socially accepted. In one class no relationship was observed.

Intelligence and Achievement.--The major works since 1950 relating cognitive variables to the social structure of the classroom center on intelligence and achievement.

A study by Lee and Lee (1950) of children from eight to twelve years of age shows that:

> . . . children form their gangs on the basis of sex first, then on the same general age, intelligence and physique.

According to Cunningham and her associates (1951), it was discovered in some experimentation that:

> . . . children having the highest I.Q.'s seek their friends from among those in the upper two-thirds in this respect, unless an individual has some other outstanding characteristics.

Detjen and Detjen (1952), authorities in elementary school guidance, also substantiate the fact that children choose their friends partially on the basis of intelligence:

> Young persons tend to choose their friends from others who are near the same age, have about the same mental capacity, whose families are in the same socio-economic station in life, and whose interests are similar. They have a tendency to reject those who differ greatly from themselves.

Garrison (1956) reported proof of a close relationship between intelligence and social acceptability in a research study conducted with a group of boys and girls with a median age of eleven years. Garrison concluded:

> The results show a constant decline in acceptance score with a decline in intelligence, indicating that intelligence is important for the social acceptance of children in regular classes.

A number of other studies have been concerned with the relationship between intelligence and sociometric results. Where the sociometric status of individuals has been correlated with their intelligence test scores, low positive correlations generally have been obtained. In studies of the social acceptance of mentally handicapped students in the regular elementary grades, Johnson (1950) and Johnson and Kirk (1950) reported that approximately

two-thirds of the mentally handicapped students were rejected on the basis of sociometric results. A further analysis in one of the studies indicated that, within the mentally handicapped group of students, the lower the intelligence the greater the percentage of isolates and rejectees.

These results were confirmed in a much later study by Goodman, Gottlieb, and Harrison (1972) of mentally retarded (EMR) children. Twenty intermediate grade and sixteen primary grade non-EMR children equally divided between the sexes were administered sociometric questionnaires to determine their social acceptance of three groups of children: non-EMR children, EMR children who were integrated in the academic routine of a nongraded school, and EMR children who remained segregated in the nongraded school's only self-contained class. The results indicated that both integrated and segregated EMR students were rejected significantly more often than non-EMR children, and that integrated EMR children were rejected significantly more often than segregated ones by boys but not by girls.

A study of the social acceptance of students at the other end of the intelligence scale was conducted by Gallagher (1958). He investigated the sociometric status of thirty gifted students in the regular elementary grades. All students had obtained a Stanford Binet I.Q. score of 150 or higher. Over 80 percent of the gifted students had

above average sociometric status, with 53 percent of them being placed in the top quartile of their classroom groups. These results indicate that, as a group, gifted students are distinctly superior in terms of social acceptance by their peers.

Martinson's (1959) study also presents some interesting evidence on sociometric choices of superior students. Her experimental group consisted of 929 boys and girls from every type of public school designed to represent the entire school population of California. The mean I.Q. of the sample, based on the revised Stanford Binet Scale, was 142.6. The children were matched by pairs with a control group on the basis of chronological age, I.Q., sex, and socioeconomic status. The programs in which the subjects participated were planned with the general areas of enrichment within the classroom, acceleration, and special groupings. In these areas a total of seventeen programs at various elementary grade levels were evaluated. It was found that first graders in the experimental programs showed highly significant gains in friendship choices, while the control gifted children showed no change, either positive or negative. Again, at the fifth and sixth grade levels, the total experimental group of 191 children showed highly significant gains in social status on the basis of responses by their peers in regular

classroom situations, while their matched controls showed no change.

Studies conducted in classrooms with a normal range of intelligence tend to support the above findings. Bonney and Powell (1953) compared the I.Q.'s of first grade students with high and low sociometric status. The high status students had a median I.Q. of 113 and the low status students had a median I.Q. of 97. Another study by Bonney (1955) produced essentially the same results among second grade children. It is interesting to note in this latter study that students with high sociometric status had a range in I.Q. from 111 to 135, whereas low status students had a range from 89 to 129. As suggested by Bonney, this indicates a greater tendency for a student of high intelligence to have low sociometric status than for a student of low intelligence to have high sociometric status.

Further evidence of a relationship between intelligence and social acceptance was presented by three other studies conducted during the 1950's. Laughlin (1954), in a study discussed earlier which involved factors relating to peer status of sixth and seventh grade children, found that children with high I.Q.'s were, with few exceptions, the best accepted by their group. Grann (1956) found a positive correlation between intelligence and social acceptance in a group of 325 elementary school children with I.Q. scores ranging from 46 to 145. The

socially most accepted had I.Q. scores of 90 or above. Thorpe (1955), in a study conducted with 980 children in thirty-four elementary classes in England, also found that intelligence was positively correlated with sociometric status. This would appear to indicate that the effects of cultural differences on this correlate of peer acceptance are negligible.

In a study to determine the effect of ability grouping upon classroom sociometric structure at the sixth grade level, Deitrich (1964) found no apparent difference in social acceptance between sixth grade children who were ability-grouped or heterogeneously-grouped.

Similar results were obtained by Borg (1966) who conducted an extensive field study to evaluate the differences in the effects upon elementary, junior high, and high school students between ability grouping and random grouping. His analysis of the sociometric choices of children in grade six revealed that the overall proportions of stars, regulars, and neglectees were similar under both systems of grouping. In addition, he concluded that:

> Average and slow pupils appear to have a far better chance of gaining social recognition in ability grouped classrooms than do comparable pupils in random grouped classrooms. For the slow pupil, ability grouping not only appears to increase the pupil's chances of being classified as a star, but also reduces his chances of being classified as a neglectee-isolate. In random grouped classrooms, the pupil's ability level appears to be an important

> factor in determining his sociometric status with pupils of higher ability consistently obtaining more favorable scores. On the other hand, ability does not appear to be an important factor in determining sociometric status in ability grouped classrooms. Sociometric status patterns for pupils of different ability levels in ability grouped classrooms were closely comparable, showing no evidence of real differences.

Related to the research of Deitrich (1964) and Borg (1966) is that of Mann (1957) who concluded that there was little real friendship between superior and average or below average students in heterogeneously grouped classrooms. In this study 67 gifted students in a total sample of 280 fifth and sixth graders were placed in regular classes for half of their work and in special workshop rooms with other gifted children for the other half. On the basis of sociometric choices, there were more acceptances and rejections of the gifted by the gifted than by the typical children. These findings suggest that friendships were based to a considerable degree upon ability level.

Some interesting work has been done relating the utilization of intelligence (a discrepancy between intelligence and achievement) and the child's position in the classroom social structure. Several studies have found that the utilization of intelligence is positively related to social acceptance.

The interpretation of the relationship suggested by Schmuck and Van Egmond (1965) is that low status in

the classroom social structure has a demoralizing effect which adversely affects utilization of the intellect. This interpretation receives considerable support from their finding that the self-perception of low status is even more crucial than actually having low status; that is, having low status and knowing it is more closely linked to low utilization of intelligence than having low status and not knowing it. Furthermore, they report that the performance level of girls was more closely linked to acceptance while that of boys was more closely linked to social power. A highly tenable interpretation of this is that girls are more demoralized by being disliked than by lacking influence, whereas the reverse is true for boys.

Van Egmond (1960), in a study of 640 elementary students in sixteen second and sixteen fifth grade classrooms, sought to link certain socio-cultural factors with each student's utilization of his academic abilities. From discrepancies between measured ability and achievement Van Egmond derived for each student an index of his utilization of intellectual abilities. The socio-cultural aspects which he focused on were the social class, sex, and the sociometric status of each student. He found that high sociometric status children utilized their intelligence more highly than low sociometric children. The latter finding was obtained for fifth grade students but not for second grade boys.

Schmuck (1962, 1963), in studies of children in grades three through six, found that students who were accurate when estimating their position in the classroom social acceptance pattern and who were negatively placed in that pattern were lower utilizers of academic abilities than students who were accurate and positively placed. Also, students who saw themselves as being liked, though they had low actual status, utilized their abilities more highly than those students who had low status and knew it.

Epperson (1963), in a study of classroom alienation in grades three through twelve, found that students who experienced high isolation and powerlessness in relation to their peers and teachers demonstrated low actualization of their academic potentials.

There is a suggestion in some of the research of a lack of relationship between social status and the utilization of intelligence when peer group values do not favor academic performance. For example, in the study reported by Van Egmond (1960), the relationship was not found among second grade boys. Moreover, the study by Pope (1953) described previously and one by Porterfield and Schlichting (1961) discussed later in this section, suggest that it might not hold among lower class boys.

The data relating academic achievement to acceptance by classroom peers resemble the foregoing research

results concerning intelligence. That is, low positive correlations exist between measured academic achievement and sociometric acceptance in the elementary classroom.

Buswell (1951) found no relationships between social acceptance and achievement at the kindergarten and first grade level, but a decided one at the fifth grade level. In a later extensive study of fifth and sixth graders, Buswell (1953) reported that those students who were highly chosen on a sociometric test had significantly higher achievement in the basic subject skills than those students who were least accepted. As a result of her findings she tentatively suggested that academic achievement, as she considered it, precedes rather than follows social acceptability.

Similarly, Laughlin (1954), in a study described previously, found a low positive correlation between academic achievement and peer acceptance among sixth and seventh grade students.

Further evidence was presented by Grann (1956) who measured the peer acceptance and academic achievement of 325 students in grades one through six in twelve elementary schools. Results showed that:

> The children who had been socially most accepted and socially most rejected in the first grade, at the beginning of the school year, did not differ in reading readiness. However, by the end of the school year, when they were retested, the most accepted children in this group

> differed significantly from the most rejected children. The group socially most accepted at the upper grade level were found to be significantly different from the group of socially most rejected children in the three achievements measured--reading, arithmetic, and basic skills.

Grann drew the same conclusion as Buswell (1951, 1953). Namely, achievement seems to be a basic factor preceding social acceptability.

Porterfield and Schlichting (1961) in a study of 981 sixth grade children determined a significant relationship between peer status as measured by a sociometric questionnaire, and reading achievement at every socio-economic level of the school community studied.

Hudgins, Smith, and Johnson (1962) conducted a study of 820 children in grades five through eight from 32 classes which was designed to determine the relationship between arithmetic ability, general ability and social acceptance of peers. They found that ability in arithmetic was closely related to general academic ability and less related, but still significantly, to general social acceptance.

In an extensive study sponsored by the U.S. Office of Education, Sears (1963) examined 195 fifth and sixth grade students from seven self-contained classes on six variables: (1) self-concept; (2) liking for peers; (3) classroom behavior; (4) achievement; (5) attitudes toward school; and (6) creativity. Results showed that

general academic achievement was a significant correlate of popularity among peers at both grade levels studied.

Similar findings were reported by later researchers. Guinouard and Rychlak (1962) found that elementary students who were not accepted or who were rejected by their classroom peers achieved below grade level. Zax et al. (1964) administered Bowers' Class Play (1960) sociometric measure discussed previously, as well as his Thinking About Yourself Scale, to 178 third graders. A significant relationship was determined between these measures and achievement scores. Results showed that when peer acceptance was lower than self acceptance, lower achievement was related in each case. Sex differences were suggested by both the Thinking About Yourself Scale and Class Play findings; i.e., the more desirable attribute for the boys was intelligence as reflected in behavior other than classroom achievement, while for the girls, achievement was what led to self-satisfaction and approval in the eyes of others.

In a study of the effects of ability grouping described previously, Borg (1966) found a significant correlation between academic achievement and social acceptance in randomly grouped fourth and sixth grade classes and no significant relationship for children in the same grades who were ability-grouped.

Yelliott et al. (1969) measured the behavior, sociometric status, self concept, and achievement of all the third grade classes of three city schools. Results showed meaningful relationships between adjustment and sociometric status and academic achievement. Specifically, children who were less well-liked by their peers or who were rated emotionally handicapped, obtained lower scores on a variety of achievement indices than their more accepted or adjusted classmates. Also, there was a more significant relationship between adjustment or sociometric status and achievement indices for girls as compared to boys.

Similar findings were reported by Liem et al. (1969) who used ratings of adjustment, parent attitude, sociometric, and achievement measures for 30 boys and 29 girls in the third grade of a small elementary school. The results of the Yellott (1969) and the Liem (1969) studies are consistent with the prior research of Zax (1964).

In a recent study to determine if children with reading problems were as well accepted by their classroom peers as were the other members of that peer group, Stevens (1971) tested 886 fourth grade students in eleven elementary schools. He found the children who were identified as remedial readers were not as socially well-accepted as their classroom peers to a significant

degree. He further determined that remedial reading boys and girls are both socially excluded to the same extent.

Purl (1968), in a unique study to explore the relationship between the degree of social acceptance and academic behavior of second and third grade minority children who were newly placed into integrated schools, utilized a sociometric questionnaire and three standardized measures of anxiety and attitude. Based on results from 113 second grade and 74 third grade Negro and Mexican-American students, she made the following generalizations regarding achievement:

1. Both high and low achieving Mexican-American children received frequent choices, but only high achieving Negro children were preferred, with rare exceptions.
2. Those children who perceive themselves as more favorably accepted by others achieve higher.

Summary of Research Findings

To summarize the findings of the research studies reviewed which investigated attitudes toward peers, personal factors such as behavior, personality characteristics, mental health, intelligence, and achievement have all shown some relationship to the social acceptability of students in elementary school classrooms. Although there may be some variation between grades and social classes, the bulk of the data demonstrate that, in general, children who are highly accepted by their peers

tend to have higher measured intelligence and to utilize it better, to have higher academic achievement, to have greater social skill and to be more active socially, to evidence more positive behavior and better adjustment in school, and to have more need-satisfying personality characteristics than children who receive little or no acceptance from their classroom peers.

Attitudes of Elementary Students Toward School

Since knowledge of the attitudes of groups within any organization is important to the successful operation of that organization, it would appear that knowledge of school-related attitudes of students is important to the successful operation of a school. Despite the logic of this assumption, school administrators of the past have frequently been more interested in checking staff rather than student attitudes as a means of improving school climate. There is, however, a great deal of valuable information available to teachers and administrators through the measurement of student attitudes.

A knowledge of student feelings could make it possible to build better school programs and help resolve many school issues. This being the case, it is rather surprising to discover that not too much is known about how elementary school children themselves view their school experience. This fact is particularly surprising

in an era when it has become almost a national pastime to find out how people feel about a wide variety of subjects.

Recently, primarily because of the widespread incidence of student unrest during the 1960's, we have become somewhat interested in learning about student opinion by the time students have reached high school or college. However, the sentiments of elementary students with regard to classroom life are relatively unexplored, especially when compared to the volume of research which has been devoted to attitudes toward self or peers among elementary school children.

The review of research on school attitudes which follows covers those studies concerned primarily with elementary school students. The studies are divided into the following categories: Studies of General Liking for School, and Studies of Correlates of School Attitudes.

Studies of General Liking for School

The earliest reported study of the attitudes of elementary students toward school was that conducted by Tenenbaum (1944) in New York City. He constructed a questionnaire consisting of twenty straightforward statements about the student's attitudes toward his school, his teacher and his classmates. This questionnaire was administered to 639 sixth and seventh grade students in

three schools situated in high, middle, and low income areas of the city. Each student also wrote a brief essay in response to the question: "Do you like school?"

Responses to the essay questionnaire provide the clearest summary of Tenenbaum's findings. Each essay was judged to reflect one of three attitudes toward school--liking, disliking, or having mixed feelings--with the following results.

	BOYS	GIRLS	TOTAL
Like school	48.6%	69.0%	58.8%
Dislike school	23.8%	10.3%	17.1%
Have mixed feelings	27.6%	20.7%	24.1%

Although a quick reading of these results would lead to the conclusion that most students liked school, it is equally valid to conclude that somewhere between one-third and one-half of the students had their doubts about the matter. Second, girls had more positive feelings toward school than did boys. Slightly less than half of the boys had clearly positive feelings as compared with a little more than two-thirds of the girls.

The feelings expressed in the students' essays were broadly corroborated by their responses to the questionnaire itself. The amount of open discontent expressed on each of the questions dealing with school life in general seemed to hover around 20 percent.

The questionnaire developed by Tenenbaum was used by another investigator, Sister Josephina (1959). The

subjects in this study were 900 students in grades five through eight drawn from nine parochial schools. As in the original design, the students were permitted to respond anonymously to the questionnaire. Although the students did not write an essay on their liking for school, their responses to the single item, "I like/do not like school," were tallied and found to be roughly equivalent to the summary description of the student essays in Tenenbaum's study. As before, the overall impression is one of students being satisfied with their school experience, even more satisfied than the students in the original sample seemed to be. Again, however, there is a noticeable percentage of students who admit to disliking school. Moreover, this percentage is about the same as that reported in the earlier study. Perhaps the apparent abundance of positive feelings among the parochial students, as compared with the New York Public school group, is largely due to the absence on the questionnaire of a category in which to register markedly ambivalent feelings. Finally, and again as before, girls were seen to be more pleased with school life than were boys.

Zeligs (1966) devised an instrument from listings by sixth grade students of things that thrilled, delighted, or made them happy. The material was arranged into separate tests for boys and girls and provided for five degrees of feeling from "like much" to "hate." The

tests were then administered to 285 other sixth graders of the same age and background. The results were tabulated and arranged according to frequency for the "like much" category for each sex. Results differed from the findings of Tenenbaum and Sister Josephina. Eighty percent of the boys had favorable attitudes toward school compared to only 66 percent of the girls.

For an extensive study to evaluate the differences in the effects upon elementary, junior high, and high school students between ability grouping and random grouping, Borg (1966) composed the "Utah State University School Inventory" (USUS). This 95-item instrument was administered to approximately 737 students in the sixth grade. Results showed that students of superior mental ability had more favorable attitudes toward school in both ability grouped and random grouped classes than students of average or low ability. In addition, superior girls had more favorable attitudes toward school in both types of grouping than boys of comparable ability.

In a related study, contrary evidence was presented by Goldberg and her associates (1963) who reported that in their research into the effect of ability grouping, comparisons between pupils in homogeneous and heterogeneous classes on attitudes toward school yielded results that were largely negative.

Hagadone (1967) conducted a study of self-concepts and school attitudes of 120 students from grades three through six in six high achieving schools. Using the Morse Pupil Attitude Questionnaire to measure attitudes toward school, Hagadone found that third graders scored lowest with a steady consistent rise to the sixth grade. This was in direct contrast to the results of the longitudinal study by Ketcham and Morse (1965) of average or normal students in grades three through eleven. Their research with which the form of the Morse questionnaire used by Hagadone originated, indicated that school attitudes were most positive for third graders and declined to the most negative level in the eleventh grade.

A study to devise scales to measure attitudes of sixth grade students toward school, toward learning, and toward technology was conducted by Roshal, Frieze and Wood (1971). Possible scores ranged from 1 for "very unfavorable" to 5 for "very favorable." The mean score for the sample of 610 sixth graders on the Attitude Toward School Scale was 3.2 which was only slightly more positive than the neutral point.

Snyder and Sibrel (1971) conducted an informal study of the attitudes toward school of all the children in grades one through six in one elementary school. By means of interviews, it was determined that at least 40 specific educational activities were perceived by the

children to exist commonly in grades one through six. Of the 40 common educational experiences identified by the children, 24 were found to be perceived more negatively by the children in grades four through six than by the primary grade children to a statistically significant degree.

An interesting study conducted by Berk, Rose, and Stewart (1970) replicated a 1969 English study by Lunn. In the English study a ten-scale instrument was administered to approximately 2100 children between the ages of nine and eleven. Scores were analyzed by sex, ability, and socioeconomic status. Results showed English girls had more favorable attitudes toward school, teacher, and school work than English boys. Ability was significantly related to attitude on all ten scales: the higher the ability, the more favorable were the attitudes toward school. In general, socioeconomic status was also positively related to school attitudes.

In the American study, the same attitude scales were administered to 787 fourth and fifth graders of all socioeconomic levels. The findings of this study showed that in every instance girls were more positive in their attitudes toward school than boys, but in contrast to the English study, there were almost no differences in the attitudes toward school of children of varying ability or differing social classes.

Some authors have reported the attitudes toward school of particular types of student populations other than the average or normal groups usually investigated. For example, Schorer (1960), a psychiatrist, interviewed 52 emotionally disturbed students ranging in age from five to fourteen, each of whom was diagnosed as revealing "a serious school problem." He reported the feelings about school these children had expressed, directly or indirectly, during their psychiatric examinations. The remarkable feature was that most commonly the children reported some pleasure, some pride in achievement, and some enjoyment mixed with displeasure. As could be expected a large number (39) expressed some dislike, but only 10 reported pure dislike without an admixture of other feelings.

In a study comparing the attitudes toward school of 314 gifted and average children in the fifth grade, Dye (1956) found that the students of average ability had more positive attitudes than those of superior ability. Among the average group, 97 percent of the boys and 94 percent of the girls were found to be "happy" in school. Equivalent figures for the gifted group were 79 percent and 87 percent.

Guthery (1971) measured the differences in attitude toward school of elementary educationally handicapped, mentally retarded, and normal students. The sample included 85 normal students, 47 educationally handicapped

students (normal I.Q. with at least two years retardation in an academic subject area), and 16 mentally retarded students. Each group was administered the Burks' School Attitude Survey.* Results showed a significantly more negative attitude toward teachers, school in general and academics in general expressed by educationally handicapped and mentally retarded students than by normal students.

Much of the more recent research on attitudes toward school of elementary students has focused on the disadvantaged. Meyers (1966), on the basis of an attitude checklist administered to 46 disadvantaged Negro boys from grades four, five, and six, half of whom were good achievers and half poor achievers, determined that both groups showed respect and positive feelings toward school as well as a desire for achievement.

Kulaga (1967, 1971), in two unrelated studies conducted in three predominantly Negro inner-city elementary schools, utilized the Morse Pupil Attitude Questionnaire to measure the attitudes of fourth, fifth, and sixth grade students toward school. He found the composite mean score on the Learning Index of the Morse instrument to be well above the standard mean. These results are consistent with the results of a study by Whitt (1966) which measured

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*The scale, authored by Harold F. Burks, Ph.D., is currently being standardized.

the attitudes toward school of students in grades three through six as part of an evaluation of a program of compensatory education in 13 inner-city elementary schools. Whitt also used the Morse Pupil Attitude Questionnaire and, like Kulaga, obtained a composite mean score on the Learning Index which was well above the standard mean.

In a study by Neale and Proshek (1967), it was hypothesized that children from an inner-city school would make less favorable evaluations of a variety of school-related concepts than would children from a school in a more advantaged neighborhood. A semantic differential was used with 350 students in the fourth, fifth, and sixth grades. Results showed that the disadvantaged students had significantly higher evaluative scores for "my school books," "having to keep quiet," "following rules," and "my school building" than the students in the more advantaged neighborhood. In both groups, as grade in school increased, evaluative scores became significantly less positive for a variety of items. Also, while attitudes toward several items were similar for the disadvantaged boys and girls, they were found to be markedly different between the more advantaged boys and girls.

VanKoughnett and Smith (1969) described a program which was primarily designed to enhance the self-concepts of elementary children in an all Negro school located in

the lowest socioeconomic sector of a middle-sized town in Michigan. The school was selected because it had the lowest mean score on a measure of self-worth administered in the 28 elementary schools in the system. A control school was designated (no information is reported to describe this school or how it was chosen) and initial and final measures of self-concept, attitudes toward school and achievement were administered to students in both schools. Results showed that the primary grade children in the experimental school showed significant gains in school attitudes when compared to primary students in the control school or later elementary students in both schools.

In a comparative study of three different ethnic groups, Thomas and Yamamoto (1971) measured the school-related perceptions of 300 Negro, 300 Mexican-American, and 300 American Indian children in grades six through eight by means of a semantic differential. Attitudes to four curriculum (social studies, language, science, mathematics) and four people (classmates, parent, teacher, myself) concepts were studied. Conclusions indicated that generally the Negro children gave the most favorable ratings on people and Indian children the least. Of the curricular areas, language was rated most vigorous and certain by all ethnic groups, while social studies generally ranked last. The authors compared these results with those of their previous study (1969) using the same instrument with

800 Caucasian middle-class students in grades six through nine. They concluded that the minority children indicated "good school-related attitudes."

Studies of Correlates of School Attitudes

In an exhaustive study of various factors influencing achievement, motivation and work output of elementary school children, Sears (1963) administered an especially devised instrument, Attitudes Toward Subject Areas and Classroom Activities, to 195 fifth and sixth graders of average and superior mental ability in seven self-contained classrooms. She found differences in school-related attitudes based on sex and mental ability. Of the various target variables measured, she found most consistent significant correlations between positive attitudes toward school and self-concepts of boys of superior ability. In addition, liking for and being liked by one's peers was positively related to positive school attitudes. The girls of superior ability with highly positive attitudes toward school showed better classroom behavior than boys or girls of average ability. The only consistent positive correlations between positive school attitudes and achievement were found for the superior boys and most of these were not statistically significant. Favorable school attitudes were found to be positively associated with creativity in both boys and

girls of superior ability. In the average boys and girls group, the correlations were negative. In measuring primary mental abilities, it was found that there was a close relationship in the superior boys between number ability and favorable school attitudes while among the superior girls, those who were brighter held more positive school attitudes.

Three other studies have found a relationship between sociometric status and attitudes toward school among elementary school children. Schmuck (1963) analyzed the findings for children in grades three through six who were part of a larger study involving 727 students in grades three through twelve. His analysis reviewed some relationships of peer liking patterns to student attitudes and achievement discovered from interviews, school records, and questionnaires. He found that pupils who were accurate when estimating their position in the peer liking structure and who were negatively placed in that structure had less positive attitudes toward school than pupils who were accurate and positively placed. Furthermore, pupils who cognized themselves as being liked, though they had low actual liking status had more positive attitudes toward school than those pupils who had low status and knew it.

Antes (1964), in a study of 476 students in grades four, five, and six, investigated children's

perceptions of teachers, self, peers and school. Results showed that girls and high sociometric status pupils had significantly higher school favorability scores than did boys or low status pupils.

Glick (1970) measured the attitudes toward school and interpersonal conditions in fourteen sixth grade classes. He found that there was a positive relationship between popularity and school attitudes. Interpersonal attraction and similarity of attitudes were generally positively related, particularly for high socioeconomic status girls. Two kinds of classroom peer influences on the individual pupil were suggested: (1) those emanating from direct interaction with peers who tend to be of similar school attitudes, and (2) modeling after high status peers who are likely to have favorable school attitudes.

Academic achievement would, from a common-sense point of view, seem to be related to school attitudes. That is, one might logically expect that scholastic success would engender positive attitudes toward school, which, in turn, would promote the possibility of further success, and so on with the same cyclic process operating at the opposite end of the continuum where the outcomes are not so pleasant. However, a review of the research studies on the relationship between attitudes toward school and academic achievement are equivocal and inconclusive.

Jackson (1968) reviewed seven studies of school attitudes to determine if a relationship existed between achievement and attitudes toward school. Six of the studies indicated no relationship while one study presented somewhat questionable evidence of a positive relationship between the two variables. Only two of the seven studies involved elementary students and both used sixth graders as subjects. One was the study by Tenenbaum (1944), previously discussed, which found no relationship between attitudes toward school and achievement. Another study, by Jackson and Lahaderne (1967) involved 292 sixth graders who responded to questionnaires that assessed their attitudes toward school. A comparison of scores on the attitude instruments with achievement test scores, I.Q., and grades received, revealed no significant relationship between attitudes toward school and scholastic performance. In addition, no sex differences were found.

Contrary evidence is presented by the results of more recent studies. While those studies reviewed by Jackson (1968) used an overall measure of satisfaction with school, the more recent studies used a measure of attitude toward specific school subjects.

In 1970, Neale, Gill, and Tismer reported a study of 215 children in the sixth grade of eight suburban classrooms. Attitudes toward four school subjects were measured by a version of the semantic differential and

achievement was measured by the S.R.A. Achievement Series. Significant positive correlations were observed between the two measures for boys in social studies, arithmetic and reading, and for girls in reading. In addition, it was noted that for both boys and girls, attitudes were significantly less favorable for most subjects at the end of the year.

Shepps and Shepps (1971) used The Survey of Study Habits and Attitudes (SSHA) to measure the attitudes of 26 sixth graders. Arithmetic achievement and reading achievement measures were also administered. Results showed a significant correlation for the total SSHA score and the school attitudes subtest with reading achievement for the boys, but among girls only the school attitudes measure was related and then only for mathematics achievement.

Further evidence of some relationship between achievement and attitudes toward specific school subjects was presented by Bassham, Murphy, and Murphy (1964) who reported more favorable attitudes toward mathematics in sixth grade students classified as overachievers compared with those classified as underachievers. Also, in a longitudinal study, Anttonen (1967) found significant relationships between fifth and sixth graders' scores both with concurrent measures and when achievement was measured six years later.

A pattern similar to that found by Anttonen has also been reported for reading achievement by Chall and Feldman (1966) and Hayes and Nemeth (1966). Significant correlations were obtained between the San Diego County Inventory of Reading Attitude and scores on standardized reading achievement tests taken concurrently at the end of grade one.

Summary of Research Findings

It may be concluded from this review of research on the attitudes of elementary students toward school that most of them, including emotionally disturbed children, have favorable attitudes toward school. However, there is evidence that as many as 20 percent, including educationally handicapped and mentally retarded students, either have doubts or dislike school. Girls and students of superior mental ability appear to have more positive attitudes toward school than boys or students of average or low ability. Several studies indicate that as grade level increases, attitudes toward school become more negative. In addition, on the whole, disadvantaged elementary students have more positive attitudes toward school than has been believed generally in the past. High sociometric status is positively related to favorable attitudes toward school, while it appears that achievement is more related to attitudes

toward specific school subjects than to a general attitude toward school.

CHAPTER III

THE RESEARCH METHODOLOGY

This chapter contains a delineation of the methodology and procedures used to conduct the study. The student population involved in the study is described along with the method used to select it. The instruments utilized in the study are detailed and the procedure followed in the study is explained.

The Population

The population was composed of children in the third and fifth grades in three school districts in Genesee County, Michigan. Within two of the districts a single-graded school was matched to a multi-graded school on the basis of socio-economic status, academic achievement, and race. In the third district an even closer match was possible since a single elementary school was designated for the study. This larger school contained both a completely single-graded program and a separate completely multi-graded program in grades one through five. Schools were matched as closely as possible between

districts on the basis of socio-economic status and academic achievement. All schools were in middle class predominantly white neighborhoods and each school had a composite score on standardized achievement tests which was above national grade level norms. Three school districts were included in the study design in order to secure a large enough sample of multi-graded students to provide meaningful results.

Subjects for the study were selected from grades three and five in an effort to assess attitudes of early as well as later elementary students. Each of these grades represents a natural milestone in a student's total development and progress through the elementary school. That is, grade three marks the end of the primary or early childhood years and provides a transition to the more content centered later elementary grades. Similarly, grade five marks the end of the elementary school experience of middle childhood and provides a transition to the larger world of the middle school and pre-adolescent years.

A second factor which helped determine the grade level of the study population was the fact that the instruments used with students were specifically designed for use with students from grade three upwards.

All of the multi-graded students in grades three and five in the designated schools who had spent their entire school careers since kindergarten in only multi-graded classes were included in the sample. There were

151 third grade and 71 fifth grade students in the multi-graded group.

All of the single-graded students in grades three and five in the designated schools who had spent their entire school careers since kindergarten in only single-graded classes were included in the sample. There were 265 third grade and 313 fifth grade students in the single-graded group.

The original sample total included 805 students, however before all testing was completed, five students left the schools involved in the study. A total of 800 students remained in the final research population. Table 1 shows the composition of the population by grade, district, sex and grouping treatment.

TABLE 1.--Composition of the Research Population by Grade, District, Sex, and Grouping Treatment.

	Single-Graded			Multi-Graded			Combined Totals
	Boys	Girls	Combined	Boys	Girls	Combined	
District A:							
Grade 3	48	48	96	38	40	78	174
Grade 5	57	65	122	25	29	54	176
District B:							
Grade 3	48	28	76	15	14	29	105
Grade 5	55	46	101	7	4	11	112
District C:							
Grade 3	48	45	93	25	19	44	137
Grade 5	46	44	90	3	3	6	96
TOTALS	302	276	578	113	109	222	800

The Instruments

The following instruments were used in the study:

1. The Coopersmith Self-Esteem Inventory
2. A sociometric questionnaire
3. The Morse Pupil Attitude Questionnaire
4. A Teacher Opinionaire

In addition, personal interviews were conducted with the principals of the five elementary schools included in the study.

Copies of all instruments used in the study are found in the Appendix.

The Coopersmith Self-Esteem Inventory

The instrument used in the study to measure the self-concept of students was the Self-Esteem Inventory developed by Coopersmith (1967). This instrument contains 58 items and the students are asked to check either response: "Like Me" or "Unlike Me," whichever they feel is appropriate. Two examples follow:

	LIKE ME	UNLIKE ME
I'm pretty sure of myself . .	X	
I often wish I were someone else		X

Most of the items in the Inventory were based upon items selected from the scale by Rogers and Dymond

(1954), but several original items were also included. All the statements were re-worded for use with children aged 8 to 10. Five psychologists then sorted the items into two groups--those indicative of high self-esteem and those indicative of low self-esteem. Items that seemed repetitious or ambiguous, or about which there was disagreement, were eliminated. The set of items was then tested for comprehensibility with a group of thirty children. The final Inventory consisted of 50 items concerned with the child's self-attitudes in four areas: peers, parents, school, and personal interest. The final form of the Inventory was initially administered to two fifth and sixth grade classes, of both boys and girls. The scores ranged from 40 to 100, with a mean of 82.3 and a S.D. of 11.6. The mean score for the 44 boys was 81.3 with a S.D. of 12.2; the mean score of the 43 girls was 83.3, S.D. of 16.7. The difference between the mean scores for boys and girls was not statistically significant. The form of the distribution was skewed in the direction of high self-esteem.

Five weeks later the Inventory was readministered to one of the fifth grade classes. With a sample of thirty, test-retest reliability after the five-week interval was .88.

The Inventory was subsequently administered to a total of 1,748 elementary children attending the public

schools of central Connecticut. These children were more diverse in ability, interests, and social background than the initial sample. They were tested in their classrooms under the guidance and supervision of Coopersmith's staff. The mean for the males was 70.1, S.D. of 13.8, which was not significantly different from that of the girls with a mean of 72.2, S.D. of 12.8. The distribution of scores obtained from this sample was also skewed in the direction of high self-esteem. Test-retest reliability after a three-year interval with a sample of 56 children from this population was .70.

The Self-Esteem Inventory originally had four sub-scales in addition to a LIE scale. After preliminary study by Dr. William Morse of the University of Michigan, the Lie scale was dropped. Since this study was concerned with school rather than home phenomena, the Home sub-scale was also eliminated. The remaining three sub-scales that were used in the study are:

Personal Self--which measures the child's perception of his general personal adequacy. (26 items)

Social Self--which measures the child's perception of his adequacy in social relationships. (8 items)

Academic Self--which measures the child's perception of his adequacy with regard to his school experience. (8 items)

A Composite Self-Esteem Score for each student is obtained by adding the total raw scores of the three subscales. The higher the score, the more positive is the child's self-concept.

The Sociometric Questionnaire

A sociometric questionnaire was used in the study to measure student attitudes toward peers. This particular measure of social acceptance of classroom peers was not the usual sociometric instrument. There are two reasons for this. On one hand many students receive a relatively high degree of acceptance from many peers, the intensity of which is distorted when only a few choices are permitted. On the other hand many students give acceptance in appreciable degrees to many of their classmates and the intensity of their first choices implied by the "selected three" criterion of the usual sociometric device belies the meaning of their warmth for the larger group. For these reasons a saturation sociometric device was selected, with each pupil being rated by each classmate.

In discussing the validity or reliability of this instrument it must be pointed out that concepts of validity and reliability do not have the same application in sociometric testing as in the field of psychometric testing. According to Jennings (1950):

> The test here is not intended as an indirect measure of other behavior. It is a sample of the actual behavior studied and as such is in itself directly meaningful and need not be validated by relating it to an external criterion. It also need not be consistent from one application to another, since it is not required to be related to a supposedly unchanging criterion (e.g., as intelligence is supposedly related to an unchanging criterion in the nervous system). The present research, however, reveals the individual's behavior in choice to show considerable stability.

According to Harmon (1949), in sociometry:

> . . . the data are almost always directly descriptive of the universe itself. Hence the only possibility of error that could invoke the concept of reliability would be clerical or mechanical errors in handling the data, rather than errors of random sampling.

Pepinsky (1949) observed:

> The concepts of "reliability" and "validity" as traditionally used--and misused--by psychologists, seem to have little direct meaning or application to the field of sociometry. The systematic development of new concepts, in a new frame of reference, is indicated, a development in which statistical method is matched by rigorous theoretical definition.

Adapted from the 1965 study by Ketcham and Morse, the sociometric instrument used in the study consisted of the single question: "How much do you like each one?" followed by a four-point rating scale and a listing of names of all children in the total classroom group. The range of choices were from "Like very little" (scored as 10 points) to "Like a lot" (scored as 40 points), so that each student's choices on the rating scale gave a score of 10, 20, 30, or 40 to each other student. The scores the individual student gave to others were averaged for "Social

Acceptance Given" which is a measure of the degree of liking expressed by each child for his classmates.

The Morse Pupil Attitude Questionnaire

The Learning Index portion of the Morse Pupil Attitude Questionnaire was used to measure student attitudes toward school. This instrument was developed by Dr. William Morse in collaboration with the Institute for Social Research, University of Michigan, to measure perceptions of students regarding their classroom environment. In the original instrument, the section labeled the Learning Index (or student attitude toward school), was comprised of four sub-tests: Motivation, Content Input, Pupil Activity, and Feedback. In his original study in 1961 which involved 430 students in grades three through eleven, Morse stated that the students he tested were able to respond to the items and differentiate between items. He indicated that there was a positive high intensity on the Learning Index section, which denotes a general positive appraisal of the classroom situation. He reported a reliability coefficient of .73 with a P value of .68 for this section of the instrument.

The Morse Pupil Attitude Questionnaire has been tested on divergent populations since its origin. The six intercorrelations on the four sub-tests of the original instrument were from .20 to .78 with five

intercorrelations being significant at the .01 level. Reliability coefficients have been found to be .92 and .89 in other studies. Retest reliability ran as high as .60.

In 1965, an expansion and change of the original 1961 study was undertaken by Ketchum in cooperation with Morse. It was from this revision that the final subtests of: Motivation (6 items), Teacher as Learning Facilitator (7 items), Conventional Learning (5 items), and Complementary Learning (8 items) were adopted to make up the Learning Index of 26 items.

Motivation is defined as a desire or an incentive to act in a certain way. Personal motivation in a student to do the work assigned and to take an interest in class is seen as a desirable trait in order that the individual may take part in class activities and maintain a high level of interest. The Motivation variable is intended to measure this kind of interest to do the work and take part in class.

The variable, Teacher as Learning Facilitator, denotes the student's perception of the way the teacher gives attention to the individuals in the class and the prompt and consistent correction of the students' papers. It also shows the students' attitudes as to the ability of the teacher to make things interesting and the extent to which the class responds to his direction when he is not present in the classroom.

The variable, Conventional Learning, describes the student's reactions to a regular kind of structured learning. A low score indicates that the child feels that the class is taught in an old-fashioned highly structured way. The higher the score, the more the child feels that there are deviations from the traditional classroom pattern.

The variable, Complementary Learning, deals with the student's perception of the classroom situation as a place where learning becomes real, meaningful, useful and relevant. The higher the score, the more the student feels that his educational experience within the school can be useful out of school and in his natural environment.

The Learning Index is computed by adding the raw scores for the four component variables. Thus the Learning Index score is not an average of the individual scores. It is the overall indication of the child's attitudes toward his school experience. The lower the score, the more unable the child is to accept the learning climate within his school; the higher the score, the more accepting he is of the learning climate provided.

The Teacher Opinionaire

Each of the 38* teachers of students included in the study were administered a brief questionnaire,

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*Although children from 39 classes were included in the study, due to the extended illness of one teacher, results were obtained for only 38 teachers.

designed to assess the personal satisfaction and fulfillment each received from his particular teaching situation. This instrument was originally developed by the Research Department of the Board of Education of Flint, Michigan for a 1966 study by Whitt of attitudes of elementary teachers in relation to student self-concept and attitudes toward school, to indicate the teacher's appraisal of the students in his classroom. The original scale consisted of four questions, however, for the present study, only answers to the last question, which follows, were tabulated.

> What degree of enjoyment, satisfaction and personal fulfillment do you experience from working with your students in your present teaching assignment?

Answers ranged on a five-point scale from "A Great Deal" (5 points) to "None" (0 points).

Interviews with Principals

Personal interviews were conducted with each of the five principals of the elementary schools included in the study to assess their commitment to the type of grouping pattern in their respective schools.

To elicit their responses, the following question was asked:

> Do you favor single-grade or multi-grade grouping for the students in this school?

The Procedure

Individual test booklets containing a copy of each of the following instruments were compiled for each of the 800 students in the sample:

1. The Coopersmith Self-Esteem Inventory,
2. A sociometric questionnaire including the names of each student's classmates.
3. The Learning Index section of the Morse Pupil Attitude Questionnaire.

All students included in the study (except for 39 absentees) were tested with their own classmates as a classroom group. Absentees were tested together in small groups at a later date. Teachers were not present during testing. A single afternoon session of approximately 45-60 minutes was used for each of the 39 classroom groups. Make-up testing sessions for absentees took approximately five afternoons.

At each testing session, the purpose of the study and each instrument were explained. It was emphasized that there were no "right" or "wrong" answers for any of the test items since they all dealt only with opinions rather than established facts. Anonymity was assured and all test questions were read orally one by one to the students allowing time for responding to each item.

Personal interviews were conducted with each of the five principals of schools involved in the study and the 38 classroom teachers were given the Teacher

Opinionaire individually. Each was instructed to indicate the answer that best expressed his opinion relative to his students and teaching assignment. The questionnaires were collected from each teacher within two to three days after receiving them.

All student testing, teacher contacts, and interviews with principals were done by the same individual during afternoons between April 19 and June 7, 1972.

All student tests were hand scored by the same individual (to minimize error), and results were submitted to a statistical analysis by computer. The test statistic utilized was a multiple-classification analysis of variance of unequal size groups.

The data from the teachers and principals were tabulated and summarized manually by the same individual. A descriptive rather than statistical analysis was used for this data.

Summary

The population for the study consisted of 800 students from grades three and five of each of two schools in two school districts, plus one school in a third district. In each of the two grades in the schools in each district, the children were grouped into single-graded classes while in each grade in the other school (or in the same school for one district) the children were grouped into multi-graded classes. All students in the

sample had been either in only single-graded or only multi-graded classes since kindergarten.

The schools within each district were matched on the basis of socio-economic status, academic achievement and race. All schools were located in middle-class, predominantly white neighborhoods with relatively high family income levels.

During the spring of 1972, three instruments were administered to the students in the study:

1. The Coopersmith Self-Esteem Inventory--to measure attitudes toward self.
2. A sociometric questionnaire--to measure attitudes toward peers.
3. The Learning Index section of the Morse Pupil Attitude Questionnaire--to measure attitudes toward school.

In addition, an opinionaire to measure teacher job satisfaction was given to all teachers of the 39 classes involved in the study, and personal interviews were conducted with the principals of the five schools included in the study to assess their commitment and support to the grouping pattern followed in their respective schools.

The student data were hand scored and results were analyzed by computer application using a multiple-classification analysis of variance of unequal size groups as the basic statistical procedure.

The data from educators involved in the study were tabulated and summarized manually using a descriptive procedure to interpret results.

CHAPTER IV

ANALYSIS OF THE DATA

The analysis of the data is divided into eight sections. The introductory section of the analysis briefly restates the purpose of the study and the research hypotheses. The second section describes the procedures followed in the analysis of student attitudes, while the third section describes the procedures followed in the analysis of teacher and principal attitudes. In the fourth section, the results of the analysis of the measures of student attitudes toward self are reported. Similarly, the results of the analyses of the measures of student attitudes toward peers and toward school are reported in sections five and six respectively. The seventh section reports the results of the analysis of teacher and principal attitudes. The final section is a summary of the research findings reported in this chapter.

Introduction

This study was designed to determine whether there are differences in attitudes toward self, peers, and

school of elementary school children in multi-graded classes as compared to those in single-graded classes.

Specifically, this study was designed to test the following hypotheses:

Hypothesis 1:

Elementary students in multi-graded classes develop more positive attitudes toward self than students in single-graded classes as measured by the Coopersmith Self-Esteem Inventory.

Hypothesis 2:

Elementary students in multi-graded classes develop more positive attitudes toward their classroom peers than students in single-graded classes as measured by a sociometric questionnaire.

Hypothesis 3:

Elementary students in multi-graded classes develop more positive attitudes toward school than students in single-graded classes as measured by the Morse Pupil Attitude Questionnaire.

Procedures for the Analysis of Student Attitudes

A multiple-classification analysis of variance of unequal size groups was employed as the basic statistical procedure in the analysis of the data for student attitudes. This method was chosen because it has the advantage of increased sensitivity over the more

traditional t-test approach. An explanation is provided by Popham (1967):

> Since education is one of the most complex behavioral fields, educational investigations must employ data analysis techniques that take into consideration not only more than one variable at a time, but also extremely subtle interactions between variables. Multiple-classification analysis of variance procedures provide such analytic techniques. Furthermore, because it is possible to isolate variation attributable to several main effects and to their interaction, it is possible to sensitize the various F-tests of significance. Increased sensitivity occurs since the size of the within mean square, the error term in the denominator of the F-ratio is reduced with the identification of each new source of variation. A smaller error term results in larger, hence more significant, F values.

The data from the study was processed on the Control Data Corporation 3600 computer located at the Computer Laboratory at Michigan State University. The program utilized for the analysis was: Multivariance: Univariate and Multivariate Analysis of Variance and Covariance, developed by Jeremy Finn of the State University of New York at Buffalo and adapted to the CDC 3600 by David Wright.

Table 2 shows the design of the matrices for each of the analyses of self and school attitudes which were conducted on class means. Table 3 shows the design of the matrix for the analysis of attitudes toward peers. This same matrix design (Table 3) was also used to test the sex effect on attitudes toward self and school since these tests required the use of individual scores rather than class means.

TABLE 2.--Design of the Matrices for the Multivariate Analyses of Variance of Class Means* for Attitudes Toward Self and Attitudes Toward School.

	Single-Graded			Multi-Graded		
	District A	District B	District C	District A	District B	District C
Grade 3	N=3	N=3	N=3	N=4	N=4	N=6
Grade 5	N=4	N=3	N=3	N=2	N=2	N=2

*Classes were used as the unit of measurement to control for errors due to variations among teachers.

TABLE 3.--Design of the Matrix for the Multivariate Analysis of Variance of Students' Scores for Attitudes Toward Peers.

	Single-Graded		Multi-Graded	
	Boys	Girls	Boys	Girls
Grade 3	N=144	N=121	N=78	N=73
Grade 5	N=158	N=155	N=35	N=36

Tables 4, 5, 6, 7, and 8 show the multivariate tests of equality of mean vectors which were made on the raw data to partition the total variance into component sources of variance. It should be remembered that the only source of variation for which there were hypotheses is "grouping treatment" (which refers, of course, to the grouping pattern of the classes of the children tested).

In addition to the tests presented in Table 4 which were conducted on class means, additional multivariate tests of equality of mean vectors were conducted using individual student scores to test the sex effect on attitudes toward self (Table 5).

TABLE 4.--Multivariate Tests of Equality of Mean Vectors of Class Means for Attitudes Toward Self.

Source of Variation	MS between	Multivariate F-Ratio	Level of Significance
1. Grade Level	25.8655	2.0615	.13
2. Grouping Treatment	107.9954	9.9310*	.002
3. School District	27.2216	4.1591	.14
4. Grade Level Related to Grouping Treatment	8.4323	.2611	.30
5. Grade Level Related to School District	19.9065	1.4979	.18
6. Grouping Treatment Related to School District	50.2052	3.7149	.002
7. Relation Between All Three (5+6+7)	7.7795	1.1821	.58

*Because of unequal cell sizes, the tests had to be reordered to test the hypothesis (so that this test was the last one in the testing sequence).

TABLE 5.--Multivariate Tests of Equality of Mean Vectors of Student Scores for Attitudes Toward Self.

Source of Variation	MS between	Multivariate F-Ratio	Level of Significance
1. Grade Level Related to Sex	12.9205	.2465	.62
2. Sex Related to Grouping Treatment	101.5987	1.9383	.16
3. Relation Between Grade Level, Grouping Treatment and Sex	47.8510	.9129	.34

TABLE 6.--Multivariate Tests of Equality of Mean Vectors of Student Scores for Attitudes Toward Classroom Peers.

Source of Variation*	MS between	Multivariate F-Ratio	Level of Significance
1. Grade Level	290.07379810	13.51178	.0005
2. Grouping Treatment	2094.52444718	109.05007	.0005
3. Sex	11.81772887	.51156	.48
4. Grade Level Related to Sex	24.4100	1.3379	.24
5. Grade Level Related to Grouping Treatment	91.9186	5.0381	.02
6. Sex Related to Grouping Treatment	23.3450	1.2796	.26
7. Relation Between Grade Level, Grouping Treatment and Sex	23.7118	1.2997	.25

*Since the test for grouping treatment variance revealed highly significant differences due to grouping and because student scores were used for the analysis, it was judged not feasible to test for school district differences.

TABLE 7.--Multivariate Tests of Equality of Mean Vectors of Class Means for Attitudes Toward School.

Source of Variation*	MS between	Multivariate F-Ratio	Level of Significance
1. Grade Level	2.5992	2.2048	.13
2. Grouping Treatment	66.5254	9.5530*	.0008
3. School District	38.0377	3.8760	.008
4. Grade Level Related to Grouping Treatment	13.3623	1.0732	.36
5. Grade Level Related to School District	2.5454	1.4700	.22
6. Grouping Treatment Related to School District	23.7681	3.7153	.01
7. Relation Between All Three (5+6+7)	11.7120	1.2088	.32

*Because of unequal cell sizes, the tests had to be reordered to test the hypothesis (so that this test was the last one in the testing sequence).

TABLE 8.--Multivariate Tests of Equality of Mean Vectors of Student Scores for Attitudes Toward School.

Source of Variation	MS between	Multivariate F-Ratio	Level of Significance
1. Grade Level Related to Sex	613.7387	3.1460	.08
2. Sex Related to Grouping Treatment	399.2935	2.0468	.15
3. Relation Between Grade Level, Grouping Treatment and Sex	3.1045	.0159	.90

In addition to the tests shown in Table 7 which were conducted on class means, additional multivariate tests of equality of mean vectors were conducted using individual student scores to test the sex effect on attitudes toward school (Table 8).

Procedures for the Analysis of Teacher and Principal Attitudes

A descriptive method rather than statistical analysis was used to interpret the attitudes of teachers and principals in the five schools involved in the study. There were two reasons for this choice. The first reason was because of the simplicity of this part of the study design. Only one dimension (job satisfaction) was measured for the 38 teachers and also, only one dimension (commitment and support for the individual school grouping pattern) was measured for the 5 principals.

A second reason was that a cursory check of the data showed very little variation in scores as the result of the grouping treatment. The only purpose of measuring the attitudes of teachers and principals involved in the study was to control for differences between school districts. Since virtually no differences were observed, there was no necessity for a more sophisticated analysis.

Results for Student Attitudes Toward Self

Rather than reporting the data for all ten of the tests conducted in the multivariate analysis of variance

for measures of attitudes toward self, only the data for results of effects found to be statistically significant which are related to Hypothesis 1 are reported.

Table 9 reports the results of the analysis of variance as applied to the effect of the grouping treatment on attitudes toward self.

TABLE 9.--Comparison of Classroom Means Between Single-Graded and Multi-Graded Classes for Attitudes Toward Self.

Dimension	Single-Graded Total N=19	Multi-Graded Total N=20	SD	F-Ratio (DF=3,25)
1. Personal Self	17.48	19.20	1.54	17.52[a]
2. Social Self	5.37	5.83	.70	6.04[b]
3. Academic Self	5.01	5.67	.60	14.73[c]
4. Total Self-Esteem	27.81	30.67	2.59	16.05[d]

a = Significant at .0003 level.
b = Significant at .02 level.
c = Significant at .0007 level.
d = Significant at .0005 level.

For the variable, Personal Self, which measures the child's perception of his general personal adequacy, the table shows that an F-ratio of 17.52 was attained which, with 3 and 25 degrees of freedom, had a significance level less than .0003. This provides strong evidence that a significant difference exists between the two groups as

the result of the grouping treatment with the difference favoring the multi-graded group.

The table illustrates that for the Social Self variable which measures the child's perception of his adequacy in social relationships, an F-ratio of 6.04 was achieved which, with 3 and 25 degrees of freedom, had a significance level less than .02. This also provides evidence that a significant difference exists between the groups as the result of the grouping treatment with the difference favoring the multi-graded group.

The table further reveals that an F-ratio of 14.73 was obtained for the variable, Academic Self, which measures the child's perception of his adequacy with regard to his school experience. This F-ratio which, with 3 and 25 degrees of freedom, had a significance level less than .0007, provides additional strong evidence that a significant difference exists between the groups as the result of the grouping treatment with the difference again favoring the multi-graded group.

The results of the preceding three sub-scales are reflected in the fourth variable, Total Self Esteem, since it is the composite of the previous three variables and measures the total of the child's perceptions of his personal, social, and academic adequacy. For this fourth variable, the table shows an F-ratio of 16.05 which, with 3 and 25 degrees of freedom, had a significance level less

than .0005. This demonstrates further very strong evidence of a significant difference between the two groups as the result of the grouping pattern with the difference again favoring the multi-graded classes.

Since all the data from the analysis of variance of the effect of the grouping treatment on attitudes toward self presented in Table 9, show a significant difference in favor of the multi-graded group, Hypothesis 1 was accepted. That is, elementary students in multi-graded classes develop more positive attitudes toward self than elementary students in single-graded classes.

The only other of the ten tests conducted in the multivariate analysis of variance for attitudes toward self which found significant differences was the test of the interaction of the grouping treatment related to school district. The results of the analysis of variance as applied to the effect of the grouping treatment related to school district are reported in Table 10.

Table 10 shows that for two of the sub-scales of the self-concept measure, significant differences were found for the effect of grouping treatment related to school district, both of which favored the multi-graded classes. The difference for the Personal Self variable was found to be significant at a level less than .002. The difference for the variable, Academic Self, was significant at a level less than .0001.

TABLE 10.--Comparison of Class Means Between School Districts and Grouping Treatments for Attitudes Toward Self.

Dimension	District A		District B		District C		F-Ratio (DF=6,50)
	Single-Graded Total N=7	Multi-Graded Total N=6	Single-Graded Total N=6	Multi-Graded Total N=6	Single-Graded Total N=6	Multi-Graded Total N=8	
1. Personal Self	17.69	17.25	18.22	20.34	16.48	19.81	8.18[a]
2. Social Self	5.31	5.53	5.77	6.23	5.05	5.75	1.19
3. Academic Self	5.42	4.78	5.06	5.97	4.49	6.11	15.23[b]
4. Total Self-Esteem	28.23	27.56	29.06	32.69	26.06	31.49	7.46[c]

a = Significant at .002 level.

b = Significant at .0001 level.

c = Significant at .003 level.

For the composite Total Self-Esteem measure, a difference at a significance level less than .003 was found for the effect of grouping treatment related to school district which again favored the multi-graded classes.

No significant differences for the main effect of grade level were found on attitudes toward self (see Table 4). This is in direct contrast to the findings of previous researchers. Coopersmith (1967) reported that self-concept declined to its lowest point in the fifth grade in a sample of students in grades three through six. Ketcham and Morse (1965), also using the Coopersmith instrument in a longitudinal study of 270 students in grades 3-11 of a university laboratory school, found that third graders had the highest mean self-concept scores. They further reported that measured self-concept gradually declined through the later elementary grades to its lowest point in the seventh grade.

No significant differences were found for the other seven effects on attitudes toward self which were tested: school district; grade level related to grouping treatment; grade level related to school district; the relation between the three effects of grade level related to grouping treatment, grade level related to school district, and grouping treatment related to school district; grade level related to sex; sex related to

grouping treatment; and, the relation between grade level, grouping treatment, and sex. F-ratios and levels of significance for each of these seven tests are found in Tables 4 and 5.

Results for Student Attitudes Toward Classroom Peers

Seven tests were conducted in the multivariate analysis of variance for attitudes toward classroom peers. Rather than reporting the data for all of the tests, only the results of effects found to be statistically significant which are related to Hypothesis 2 are reported.

Table 11 reports the results of the analysis of variance as applied to the effect of the grouping treatment.

TABLE 11.--Comparison of Score Means Between Single-Graded and Multi-Graded Students for Attitudes Toward Classroom Peers.

Dimension	Single-Graded Total N=578	SD	Multi-Graded Total N=222	SD	F-Ratio (DF=1,798)
Social Acceptance Given	24.72	4.33	28.34	4.51	109.05[a]

a = Significant at .0005 level.

For the dimension, Social Acceptance Given, which measures the degree of liking the child expresses for his classmates, the table shows than an F-ratio of 109.05 was obtained which, with 1 and 798 degrees of freedom, had a significance level less than .0005. This provides strong evidence that a significant difference exists between the two groups as the result of the grouping treatment with the difference favoring the multi-graded students.

Since the results of the analysis of variance of the grouping treatment effect on attitudes toward peers presented in Table 11 show a significant difference in favor of the multi-graded students, Hypothesis 2 was accepted. That is, elementary students in multi-graded classes develop more positive attitudes toward their classroom peers than elementary students in single-graded classes.

A further significant difference was found in the effect of grade level related to grouping treatment. Table 12 reports the results of the analysis of variance as applied to the effect of grade level related to grouping treatment.

Table 12 shows that for the Social Acceptance Given dimension, a significant difference was found for the effect of grade level related to grouping treatment, which favored the multi-graded fifth grade students.

TABLE 12.--Comparison of Score Means Between Grade Level and Grouping Treatment for Attitudes Toward Classroom Peers.

Dimension	Grade 3		Grade 5		F-Ratio (DF=1,798)
	Single-Graded	Multi-Graded	Single-Graded	Multi-Graded	
Social Acceptance Given	23.47	28.10	25.79	28.84	91.92[a]

a = Significant at .02 level.

These results are in contrast to those reported by Ketcham and Morse (1965). Using the same type of sociometric device to measure social acceptance and with a total sample of 150 students in grades 3, 5, 7, 9, and 11, they found that the third grade students with a total average score of 30.04 expressed a greater degree of liking for their classmates than the fifth grade students who had a total average score of 25.70. The authors did not indicate if this difference was statistically significant.

Ketcham and Morse (1965) also reported that the boys in both the third and fifth grades in their sample expressed a greater degree of liking for their classmates than the girls. However, no indication was given as to whether the difference was statistically significant.

In the present study, although there was a difference in attitudes toward classroom peers favoring the boys, it lacked statistical significance. As shown in

Table 6, the test for the sex effect found an F-ratio of .51 which, with 1 and 798 degrees of freedom had a significance level less than .48.

No significant differences were found for the other four effects on attitudes toward classroom peers which were tested: grade level related to sex; grade level related to grouping treatment; sex related to grouping treatment; and the relation between grade level, grouping treatment, and sex.

Results for Student Attitudes Toward School

Rather than reporting the data for all ten of the tests conducted in the multivariate analysis of variance for measures of student attitudes toward school, only the results of effects found to be statistically significant which are related to Hypothesis 3 are reported.

Table 13 reports the results of the analysis of variance as applied to the effect of the grouping treatment.

For the variable, Motivation, which measures the desire or incentive of the child to do work assigned and to take an interest and participate in class activities, the table shows that an F-ratio of 13.84 was attained which, with 4 and 24 degrees of freedom, had a significance level less than .0001. This provides very strong evidence that a significant difference exists between the two

groups as a result of the grouping treatment with the difference favoring the multi-graded classes.

TABLE 13.--Comparison of Class Means Between Single-Graded and Multi-Graded Classes for Attitudes Toward School.

Dimension	Single-Graded Total N=19	Multi-Graded Total N=20	SD	F-Ratio (DF=4,24)
1. Motivation	17.76	19.29	1.26	13.84[a]
2. Teacher as Learning Facilitator	20.08	20.97	1.17	2.72
3. Conventional Learning	11.95	11.73	.92	.21
4. Complementary Learning	19.13	18.89	1.32	1.69
5. Learning Index	68.31	70.97	3.14	6.72[b]

a = Significant at .001 level.

b = Significant at .02 level.

The table illustrates that for the variable, Teacher as Learning Facilitator, which measures the child's perception of the way in which the teacher carries out the various aspects of his classroom teaching responsibilities, an F-ratio of 2.72 was achieved which, with 4 and 24 degrees of freedom, had a significance level less than .11. This gives evidence that there is no significant difference between the two groups for the variable Teacher as Learning Facilitator as a result of the grouping treatment.

For the variable, Conventional Learning, which measures the perception the child has of the amount of traditional structure in his classroom learning experience, the table reveals that an F-ratio of .21 was found which, with 4 and 24 degrees of freedom, had a significance level less than .64. This indicates that no significant difference exists between the two groups for the Conventional Learning variable as a result of the grouping treatment.

The table shows that for the variable, Complementary Learning, which measures the child's perception of his classroom learning as meaningful, useful, and relevant to his out-of-school as well as in-school experience, an F-ratio of 1.69 was obtained which, with 4 and 24 degrees of freedom had a significance level less than .20. This shows that no significant difference exists between the two groups for the Complementary Learning variable as a result of the grouping treatment.

The results of the preceding four sub-scales are reflected in the fifth variable, Learning Index, since it is the composite of the previous four variables and measures the totality of the child's attitudes toward his school experience. For this fifth variable, the table shows an F-ratio of 6.72 which, with 4 and 24 degrees of freedom, had a significance level less than .02. This furnishes evidence of a significant difference between the

two groups as the result of the treatment with the difference favoring the multi-graded classes. It is important to note that the significance in the composite measure of school attitudes was due entirely to the highly significant difference (P less than .0001) favoring the multi-graded classes on the meaningful Motivation sub-scale.

Since the analysis of variance of the grouping treatment effect on attitudes towards school presented in Table 13 shows that a significant difference in favor of the multi-graded classes was obtained for the Learning Index, Hypothesis 3 was accepted. That is, elementary students in multi-graded classes develop more positive attitudes toward school (apparently due to their high level of motivation) than elementary students in single-graded classes.

The test of an additional effect, that of the interaction of the grouping treatment related to school district, found a significant difference between grouping treatments and among school districts.

Table 14 shows the results of the analysis of variance as applied to the effect of the grouping treatment related to school district.

Table 14 illustrates that there was only one variable in the measure of attitudes toward school for which a significant difference was discovered for the

TABLE 14.--Comparison of Class Means Between School Districts and Grouping Treatments for Attitudes Toward School.

Dimension	District A		District B		District C		F-Ratio (DF = 8,48)
	Single-Graded N=7	Multi-Graded N=6	Single-Graded N=6	Multi-Graded N=6	Single-Graded N=6	Multi-Graded N=8	
1. Motivation	17.92	17.86	17.90	19.80	17.43	19.99	4.50[a]
2. Teacher as Learning Facilitator	20.07	20.99	20.66	20.67	21.80	21.19	.59
3. Conventional Learning	11.93	11.52	11.30	10.90	12.61	12.50	.06
4. Complementary Learning	18.44	17.69	20.28	22.58	18.78	19.69	3.17
5. Learning Index	68.40	68.08	67.19	70.61	69.33	73.40	2.40

a = Significant at .02 level.

effect of grouping treatment related to school district, and that again was Motivation. For this one variable an F-ratio of 4.50 was obtained which, with 8 and 48 degrees of freedom, had a significance level of .02. This indicated a significant difference for the effect of grouping treatment related to school district which favored the multi-graded classes in School District C. As shown by the table, this difference, however, was not significant enough to influence the Learning Index variable. For this last variable an F-ratio of only 2.40 was reached which, with 8 and 48 degrees of freedom, had a significance level less than .11. This indicates that no significant difference was found for the Learning Index as a result of the effect of the grouping treatment related to school district.

An additional significant difference was found for the test of the effect of school district on attitudes toward school. Table 7 shows that an F-ratio of 3.8760 was reached which, with 1 and 798 degrees of freedom, had a significance level less than .008. The difference favored School District C.

The effect of regional differences, regardless of how closely research populations are matched, is very common in educational research. So the results of this particular test which show a significant difference

between school districts for the measure of school attitudes are not unexpected.

No significant difference for the main effect of grade level on attitudes toward school was found (see Table 4). These results are in direct contrast to the findings of Ketcham and Morse (1965) who reported that in their longitudinal study of 270 students in grades 3-11, mean scores for fifth graders on the Learning Index were considerably higher than those of third graders. They did not report, however, whether the difference was statistically significant.

No significant differences were found for the other six effects on attitudes toward school which were tested: grade level related to grouping treatment; grade level related to school district; the relation between the three effects of grade level related to grouping treatment, grade level related to school district, and grouping treatment related to school district; grade level related to sex, sex related to grouping treatment; and the relation between grade level, grouping treatment, and sex.

Results for Teacher and Principal Attitudes

To control for differences between school districts, the attitudes of the 38 teachers and the 5 principals from the schools involved in the study were evaluated.

Teachers were administered a questionnaire which was designed to assess their feelings of enjoyment, satisfaction, and fulfillment experienced from their teaching situations. Choice of answers ranged on a five-point scale from "A Great Deal" (5 points) to "None" (0 points). Points were totaled for each teacher and the average was computed for teachers in each type of grouping treatment.

Table 15 reports the results of teacher attitudes between single-graded and multi-graded classes.

TABLE 15.--Comparison of Mean Scores Between Teachers of Single-Graded and Teachers of Multi-Graded Classes for Degree of Job Satisfaction.

Dimension	Teachers of Single-Graded Classes N=19	Teachers of Multi-Graded Classes N=20
Degree of Job Satisfaction	4.47	4.54

As shown by Table 15, based on a five-point scale, the attitudes of teachers in both grouping treatments were very similar. That is, the teachers of single-graded classes were about as committed to teaching within single-graded classes as were the teachers of multi-graded classes and vice versa. Therefore, the effect of teacher attitudes on the basis of grouping treatment may

be considered to have applied approximately equally in all school districts.

In personal interviews principals were asked the question: "Do you favor single-graded or multi-graded grouping for the students in this school?" Each of the five principals, including the principal of the one school included in the study which contained both a single-graded and a multi-graded program, wholeheartedly endorsed the particular grouping pattern(s) used in their respective schools. Except for the principal referred to, who expressed complete support for both patterns of grouping (based on observed results of pupil progress under both plans), each principal even indicated that he felt that for his particular school population the grouping plan in use in his school was superior to the alternate plan. Therefore, the effect of principal attitudes on the basis of the grouping treatment may be considered to have applied essentially equally in all districts.

Summary of Research Results

A multivariate analysis of variance of unequal size groups was utilized by computer to analyze the results of the measures of student attitudes toward self, classroom peers, and school.

A highly significant difference (P less than .0005) was obtained in favor of the multi-graded classes for the

composite measure of attitudes toward self. An additional finding was made of a significant difference (P less than .003) on the composite self-concept measure for the effect of the relation between school district and grouping treatment which also favored the multi-graded classes (in District B). No other significant differences related to the grouping treatment were found for measured self-concept.

A highly significant difference (P less than .0005) was also found in favor of the multi-graded classes for attitudes toward classroom peers. A further significant difference (P less than .02) was discovered for the effect of grade level related to treatment on attitudes toward classroom peers with the difference favoring the multi-graded fifth graders.

No additional significant differences related to the grouping treatment were found for peer attitudes.

A significant difference (P less than .02) was attained, again in favor of the multi-graded classes, for the composite measure of attitudes toward school. This difference was due entirely to a highly significant difference (P less than .0001) in favor of the multi-graded classes for the Motivation variable. A related finding of a significant difference (P less than .001) was made for the effect of the relation between school district and grouping treatment which again favored the multi-graded

classes (this time in District C) for the Motivation variable on the measure of school attitudes.

No further significant differences related to the grouping treatment were found for attitudes toward school.

A descriptive procedure was used to interpret the results of the measurement of teacher and principal attitudes. It was found that there were virtually no differences in the attitudes of teachers and principals between grouping treatments. That is, educators in both single-graded and multi-graded schools were satisfied and supportive of the particular grouping pattern used in their respective schools. Thus the effect of teacher and principal attitudes was considered to be essentially the same in all districts.

The results of the analysis of the data from the study summarized above provided positive evidence for all three research hypotheses. That is, elementary students in multi-graded classes develop more positive attitudes toward self, peers, and school than elementary students in single-graded classes.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

This chapter includes a summary of the study, conclusions based on the research evidence, and some implications of the study as well as some speculations related to the findings of the study.

Summary

This section is a summary of the purpose, procedures, and results of the study, and includes a synopsis of the related research and literature which was reviewed for the study.

The Purpose

The purpose of the study was to determine the effects of multi-grade grouping on the attitudes of elementary students. Specifically, the study was designed to measure the attitudes toward self, classroom peers, and school of third and fifth grade students who had been grouped into multi-graded classes. The results of this measurement, when compared with the same assessment of attitudes of similar third and fifth grade students who

had been grouped into single-graded classes, would then provide insight into student attitude development in multi-graded classes.

The dependent variable in the study was student attitudes while the independent variable was the modification of the method of grouping third and fifth grade students. Therefore, the findings of the study should provide information about possible effects on attitude development of grouping students other than on the traditional age-grade basis.

Related Research and Literature

The review of related research and literature concerned with multi-grade grouping in the elementary school revealed that this method of grouping students has been viewed generally with favor. However, the evidence from the three studies which have examined the effects of multi-grading on student attitudes toward self, peers, and school has been inconclusive.

A survey of 61 research studies of the self-concepts of elementary students indicated that there is a persistent and significant relationship between the self-concept and academic achievement in the elementary school for both disadvantaged and other students.

An overview of the literature reporting 65 investigations of attitudes toward peers of elementary students

found that personal factors such as behavior, personality characteristics, mental health, intelligence and achievement have all shown some relationship to the social acceptability of elementary students.

The examination of the research and literature pertaining to attitudes toward school of elementary students showed that most of them have favorable attitudes toward school, although there is some evidence that as many as 20 percent are ambivalent towards or dislike school. Research results show that girls and students of superior ability appear to like school better than boys or students of average or low ability; as grade level increases, attitudes toward school become more negative; high sociometric status is positively related to favorable school attitudes; and, achievement is more related to attitudes toward specific school subjects than to a general attitude toward school.

Procedures

The subjects for this study were 800 students in the third and fifth grades in five elementary schools in three school districts in Genesee County, Michigan. In each of the two grades in one school in each district, 578 children who had been grouped only into single-graded classes since kindergarten were included in the study. In each grade in another school in two districts, and the same school in one district, 222 children who had been

grouped exclusively into multi-graded classes since kindergarten were included in the study. The schools within each district were matched on the basis of socio-economic status, academic achievement, and race.

Each student was administered the following instruments.

1. The Coopersmith Self-Esteem Inventory--to measure attitudes toward self.
2. A sociometric questionnaire--to measure attitudes toward classroom peers.
3. The Learning Index portion of the Morse Pupil Attitude Questionnaire--to measure attitudes toward school.

In addition, each of the 38 teachers of students included in the study were administered a questionnaire designed to determine their satisfaction with their teaching situation. Also, interviews were conducted with each of the five principals of the schools included in the study to determine their commitment and support for the grouping pattern utilized in their respective schools.

A multiple-classification analysis of variance of unequal size groups was employed by computer for the analysis of the data for student attitudes. A descriptive analysis was made of the results of the measurement of attitudes of teachers and principals involved in the study.

Major Findings

The results of the scores achieved by the elementary students on the three measures of attitudes used in

this study clearly indicated that multi-grade grouping has a positive effect upon measured attitudes. Specifically, for self-concept, students in single-graded classes obtained a composite mean score of 27.81, while students in multi-graded classes obtained a composite mean score of 30.62. The difference which favored the multi-graded classes was significant at the .0005 level.

A composite mean score of 24.72 was achieved by the single-graded students for attitudes toward classroom peers, while multi-graded students achieved a composite mean score of 28.34. Again, the difference, significant at the .0005 level, favored the multi-graded students.

For attitudes toward school, a composite mean score of 68.31 was attained by single-graded students, and a composite mean score of 70.97 was attained by multi-graded students. The difference which again favored the multi-graded students, was significant at the .02 level.

Additional Findings

For measured self-concept, results showed a difference significant at the .003 level on the composite mean score for the effect of the interaction between

school district and grouping treatment, which favored the multi-graded classes. Additionally, no significant differences were found for either of the effects of grade or sex related to treatment for attitudes toward self.

For attitudes toward classroom peers, a difference significant at the .02 level was discovered for the effect of grade related to treatment with the difference favoring the multi-graded fifth graders. No significant difference was found for the effect of sex related to treatment on attitudes toward classroom peers.

For attitudes toward school, a significant difference at the .001 level was obtained for the effect of the interaction between school district and the grouping treatment which again favored the multi-graded classes for the variable, Motivation, on the school attitudes measure. No significant differences were found for the effects of grade or sex related to treatment for attitudes toward school.

Finally, the results of the measurement of attitudes of teachers and principals involved in the study disclosed that the attitudes of all educators showed essentially the same degree of support and commitment for the particular method of grouping students used in their respective schools.

Conclusions

The evidence gathered from the results of the administration of the three instruments designed to measure student attitudes supports the following conclusions:

1. Third and fifth grade students who have been grouped into only multi-graded classes since kindergarten develop more positive attitudes toward self than similar students who have been grouped into only single-graded classes since kindergarten.

2. Third and fifth grade students who have been grouped into only multi-graded classes since kindergarten develop more positive attitudes toward classroom peers than similar students who have been grouped into only single-graded classes since kindergarten.

3. Third and fifth grade students who have been grouped into only multi-graded classes since kindergarten develop more positive attitudes toward school than similar students who have been grouped into only single-graded classes since kindergarten.

These conclusions support the original premises upon which this study was based. That is, the opportunity

for the development of a more positive self-image, better social acceptance, and more positive attitudes toward school, seems to be present when a wider chronological age association is present in the elementary classroom. It would appear that students may find a better environment for learning attitudes in classrooms without age-grade boundaries, and which eliminate a lock-step sequence of social and personal growth and development of individual children.

Implications

For Administrators

The data compiled and reported in this study should motivate administrators to provide leadership in modification of the regular age-graded classroom. The results of this study indicate that for both early and later elementary students of both sexes, multi-grade grouping provides for the development of more positive student attitudes toward self, classroom peers, and school than does the traditional single-graded plan. The results of previous research show either no significant difference between single- or multi-graded students, or a difference favoring multi-graded students, for achievement. These combined results provide administrators sufficient evidence for the adoption and expansion of multi-grade grouping as a method superior to the traditional single-graded method.

A further advantage, from the administrative point of view, is that multi-graded classes are a sound, realistic, and positive solution to the problem of establishing and maintaining a balanced pupil-teacher ratio in an elementary school.

For Teachers

The data compiled and reported in this study should encourage teachers to welcome assignment to multi-graded classrooms and motivate them to promote multi-grade grouping. Teachers should understand that in multi-graded classes, both early and later elementary children regardless of sex will develop more positive self-concepts, social acceptance of classroom peers, and attitudes toward school than in traditional single-graded classes, and that based on previous research, children in multi-graded classes will achieve as well or better than children in single-graded classes. This knowledge provides teachers sufficient evidence for the adoption and furthering of multi-grade grouping as a method superior to the traditional single-grade method.

Also, as contract negotiations continue to reflect the concern of teachers for class size as a matter of vital importance in working with children, multi-grade classes provide a workable solution to uneven grade enrollment.

For Parents

Based on the findings reported in this study, parents should understand that their early or later elementary aged children regardless of sex, who are grouped into multi-graded classes have an increased opportunity for the development of more positive attitudes than when grouped into regular single-graded classes. That is, their childrens' self-concepts will be more positive as a result of their experiences in multi-graded classes. Additionally, due to more positive attitudes toward their classroom peers, the social skills and relationships of their children should be enhanced. Furthermore, because of a greater liking for school, their children should derive more enjoyment and satisfaction from their school experience than if grouped into traditional single-graded classes. These findings combined with previous research on the achievement of multi-graded children, should motivate parents to accept and cooperate in expanding multi-grade grouping as a method superior to the traditional single-graded method.

For Further Research

The problems encountered in the course of this study, and the data gathered suggest other areas for research.

1. The population of the present study was composed of middle-class, predominantly white children who were achieving at or above grade level. There is a need to replicate the present study with populations of differing social classes and achievement levels.

2. A need exists for an investigation of the effects of multi-grade grouping on the development of leadership skills, creativity, and mental health in elementary children.

3. A more normal social situation of a wider range of individual characteristics and abilities are extant in a multi-graded class than in a regular single-graded class. Therefore, there is a need for a method of appraising the effect of multi-grade grouping on student appreciation and respect for differences and individuality.

4. There is a need for a study comparing the teaching styles, methodology, and techniques of teachers committed to multi-grade grouping with those of teachers committed to single-grade grouping.

Speculations

Any educational research, regardless of the outcome, quite naturally leads to speculation as to the

reasons for the particular results obtained. The present study is no exception.

Admittedly, this research study was far from precise due to the many uncontrolled and largely uncontrollable effects attributable to human variability which were inherent in the study (as they are in most research studies in the behavioral sciences). Nevertheless, it seems readily apparent from the significant statistical results obtained in this study, that there is something intrinsic to multi-grade grouping which has a salutary effect on the attitudes of elementary children. What is there in multi-grade grouping which promotes the development of more positive student attitudes? No special curricula, instructional materials, physical facilities, or teacher training are required for multi-grading as against single-grading--or at least they were not found in the present study. Rather, aside from the differing social structure of the multi-graded classroom, it may be conjectured that the most significant difference in a multi-graded class as compared to a single-graded class may well be the de-emphasis or complete disregard for traditional age-grade standards or expectations by the teacher. This means that each child in a multi-graded classroom is perceived as totally different from other individuals in the class rather than similar as is often the case in single-graded

classes. The implication of this for instruction is obvious. That is, seeing students in terms of differences rather than similarities, teachers in multi-graded classes are literally compelled to instruct children at each individual's level of readiness and competency regardless of age or grade level.

The result of such an approach would seem to guarantee that each child would experience academic success which, of course, strengthens and enhances a child's self-concept which, in turn, promotes further successes. Furthermore, feeling competent and good about himself, the child would see his peers in positive terms and so relate to them in mutually satisfying ways. The end result of more positive self-concepts and increased social acceptance could well be a more positive attitude toward school.

It remains for future research to verify or refute these speculations as well as the findings and conclusions of this study. At this point, however, it seems clear that multi-grade grouping is superior to single-grade grouping in the elementary school. Nevertheless, this does not preclude the possibility that other even more effective ways of facilitating and enhancing the learning of children will yet be discovered. It is hoped that the search will continue.

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APPENDICES

APPENDIX A

COOPERSMITH SELF-ESTEEM INVENTORY

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COOPERSMITH SELF-ESTEEM INVENTORY

Please mark each statement in the following way:

If the statement describes how you usually feel, put a check in the column "LIKE ME." If the statement does not describe your feelings, put a check in the column "UNLIKE ME."

REMEMBER: THERE ARE NO RIGHT OR WRONG ANSWERS.

	LIKE ME	UNLIKE ME
Example: I'm a hard worker.	✓	
1. I spend a lot of time daydreaming.		
2. I'm pretty sure of myself.		
3. I often wish I were someone else.		
4. I'm easy to like.		
5. I find it very hard to talk in front of the class.		
6. I wish I were younger.		
7. There are lots of things about myself I'd change if I could.		
8. I can make up my mind without too much trouble.		
9. I'm a lot of fun to be with.		
10. I'm proud of my school work.		

	LIKE ME	UNLIKE ME
11. Someone always has to tell me what to do.		
12. It takes me a long time to get used to anything new.		
13. I'm often sorry for the things I do.		
14. I'm popular with kids my own age.		
15. I'm doing the best work that I can.		
16. I give in very easily.		
17. I can usually take care of myself.		
18. I'm pretty happy.		
19. I would rather play with children younger than me.		
20. I like to be called on in class.		
21. I understand myself.		
22. It's pretty tough to be me.		
23. Things are all mixed up in my life.		
24. Kids usually follow my ideas.		
25. I'm not doing as well in school as I'd like to.		
26. I can make up my mind and stick to it.		
27. I really don't like being a (boy) (girl).		
28. I have a low opinion of myself.		

		LIKE ME	UNLIKE ME
29.	I don't like to be with other people.		
30.	I often feel upset in school.		
31.	I often feel ashamed of myself.		
32.	I'm not as nice looking as most people.		
33.	If I have something to say, I usually say it.		
34.	Kids pick on me very often.		
35.	My teacher makes me feel I'm not good enough.		
36.	I don't care what happens to me.		
37.	I'm a failure.		
38.	I get upset easily when I'm scolded.		
39.	Most people are better liked than I am.		
40.	I often get discouraged in school.		
41.	Things usually don't bother me.		
42.	I can't be depended on.		

APPENDIX B

SOCIOMETRIC QUESTIONNAIRE

APPENDIX B

SOCIOMETRIC QUESTIONNAIRE

HOW MUCH DO YOU LIKE EACH ONE?

	A Lot	Some	A Little	Very Little
Nels A.				
Steven B.				
Angela B.				
Mary C.				
Jeff C.				
Mary A.				
Lisa E.				
John F.				
Alan F.				
Alan G.				
Susan G.				
Lorraine H.				
Cathy H.				
Troy H.				
Charles H.				
Scott K.				
Martha L.				
Jill L.				
Lou Ann L.				
Rickie M.				
Gregg N.				
Jeff N.				

(Names listed above are intended to illustrate the manner by which names of each child's classmates were presented to him for rating.)

APPENDIX C

MORSE PUPIL ATTITUDE QUESTIONNAIRE

APPENDIX C

MORSE PUPIL ATTITUDE QUESTIONNAIRE

PART I

Here are some questions concerning what you do or how you feel in your classroom. Put an X in front of the number under each question which best tells what you do or how you feel. Remember, there are no right or wrong answers, so answer the way you really think.

1. When the class is discussing things, what do you usually do?

____1. Think about other things you would rather be doing.
____2. Just say something once in a while.
____3. Tell your ideas often.
____4. Offer ideas whenever you can.

2. Some classes are places you like to be, some are not. How do you like being in your class?

____1. A lot.
____2. Some.
____3. A little.
____4. Not at all.

3. Does your teacher wander and get off the subject?

____1. Often.
____2. Sometimes.
____3. Once in a while.
____4. Hardly ever or never.

4. Do you feel that school work is more fun than not fun?

____1. I feel very strongly this way.
____2. I feel quite a bit this way.
____3. I feel a little this way.
____4. I don't feel this way at all.

PART II

How often do these activities happen in your class? After you read a question, look for the best answer at the end of the question. You may not find the exact answer you want but pick the answer that most nearly suits you and put an "X" in that space.

These questions should be answered rather quickly. If you come to one you can't make up your mind about, put down the answer that seems to be more nearly what you think.

BE SURE TO ANSWER ALL QUESTIONS.

	Almost Always	Usually	Some-times	Hardly Ever
1. Do you find yourself thinking about other things when you're supposed to be doing the classwork?				
2. Do you really like to do the work in your class?				
3. How often do you get bored in your class?				
4. Does the teacher correct your work so you know how well you do?				
5. Do you use what you learn in class to help you outside of school?				
6. Do problems you work on in school usually have only one right answer?				
7. When you are outside of school do you talk about things you learn in class?				

	Almost Always	Usually	Some-times	Hardly Ever
8. Does it seem that the main thing in class is to let your mind act like a sponge and "soak up" as much as possible?				
9. On tests are you asked to "fill in the blank" and give dates?				
10. Do problems you work on in school have several answers that are right?				
11. After you've finished studying something does the teacher ask you how good you think the ideas are?				
12. Does the teacher give attention to individuals in your class who don't seem to understand the work?				
13. Do you have to remember lists of things in the right order?				
14. How often are you asked to see how many different ideas you can think up about a problem?				
15. Are you ever asked to decide whether things you are learning agree with ideas you've had in the past?				

	Almost Always	Usually	Some-times	Hardly Ever
16. Do you have home work in which you have to memorize things?				
17. In your class are you asked to try new or different ways of doing things?				
18. Do you help in deciding what activities your class will do?				
19. Does your teacher make most everything seem interesting and important?				
20. Does your teacher check your work to make sure that you are on the right track?				
21. Does your teacher keep order with a firm hand?				
22. Does your class behave well even when the teacher is out of the room?				

APPENDIX D

TEACHER OPINIONAIRE

APPENDIX D

TEACHER OPINIONAIRE*

NAME_____ SCHOOL_____

GRADE_____MULTI-GRADED_____SINGLE-GRADED_____

Please indicate the number of years you have taught a multi-graded class. ____years

Please indicate the number of years you have taught a single-graded class. ____years

You are asked only for an estimate or opinion in answering the following questions. Please check whichever answer most nearly expresses your opinion.

BE SURE TO ANSWER ALL THE QUESTIONS.

1. To what extent do most of your pupils show a sense of self-esteem, self respect and appreciation of their own worthiness?

   Very Strong___Strong___Average___Mild___Weak___

2. Please give an estimate of the average achievement level of your class.

   Above Grade Level___At Grade Level___Below Grade Level___

3. Please indicate your appraisal of the usual classroom behavior of the pupils in your class.

   Excellent___Above Average___Average___

   Below Average___ Poor___

4. What degree of enjoyment, satisfaction, and personal fulfillment do you experience from working with your students in your present teaching assignment?

   A Great Deal_____Quite a Bit____ Some_____

   Little_____ None_____

*Since the research design of this study required an appraisal of teachers' feelings of job satisfaction in an attempt to control for variation between teachers and districts, only responses to question 4 were tabulated for analysis.