THE MULTI-AGE CLASSROOM: A DESCRIPTION OF MULTI-AGE GROUP TEACHING PRACTICE IN AN ELEMENTARY SCHOOL

By

William Cook Miller

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

College of Education

1991

ABSTRACT

THE MULTI-AGE CLASSROOM: A DESCRIPTION OF MULTI-AGE GROUP TEACHING PRACTICE IN AN ELEMENTARY SCHOOL

By

William C. Miller

The focus of this study was on an elementary school where multi-age grouping was reported to be a sound educational practice that enhanced the academic and social skills of the students. Although there has been substantial research about the benefits and outcomes of multi-age grouping, only limited efforts have been made to report what experienced multi-age group teachers say about the practice. Included in this study is an examination of how multi-age classrooms are organized for instruction and an analysis of the perceptions, attitudes, and beliefs of the students, teachers and support staff.

Although public educational programs in America contain a wide variety of organizational patterns, the vast majority of public schools utilize an age-graded organizational structure. This structure has endured for over one hundred and forty years, apparently without its underlying assumptions being questioned. Contained in this study is an analysis of an alternative age/grade organizational pattern. Instructional strategies, student groupings, and teacher perceptions of multi-age grouping are detailed as part of the study.

The ethnographic method of inquiry was utilized for this study, along with a search of the literature on alternative age/grade grouping and a review of educational history. The primary methods of data collection included participant observation,

interview, and document analysis.

The findings from the data illustrated that multi-age grouping was a viable form of organization for instruction. The use of cooperative small-group learning, student-helping-student strategies, and personalized learning plans enabled teachers to implement multi-age instruction. A reduction in student failure and retention, accommodations for individual differences, and continuous individual assessment of progress characterized the operation and outcomes of multi-age classroom settings.

From the findings of the study, the researcher concluded that implementation of the practices associated with multi-age grouping took more than just a change in class configuration. It involved a redefinition of teaching. A re-education of the educational community was necessary for the instructional practices associated with multi-age grouping to be accepted by educators and the public at large.

This dissertation is dedicated to those who question our system of public education and who seek a better way. This work is also dedicated to my father, Dr. William Miller. He taught me, by his example, that the best school organizational plan in the world needs people to make it work. People cannot make a program work when they do not understand it or when they fail to see the need for the changes it will entail. People can guarantee the success of the program if they consider it "their" program. Assuring their involvement is the task of the individual who seeks to improve education.

ACKNOWLEDGMENTS

The help and support of family, teachers and collegues have made this dissertation possible. I would like to acknowledge several people who share in this accomplishment.

I want to express my appreciation to Dr. Charles Blackman, chair of my dissertation committee, for his guidance, encouragement and belief in me through my entire doctoral program.

I also wish to thank Dr. Samuel Moore, Dr. Peggy Riethmiller and Dr. Donald Burke for the direction and support they provided me throughout my program.

Special thanks go to my family for their high level of patience, especially Marianne, who kept me going and provided me support.

To these special people, I express my sincere thanks.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Public educational programs in America contain a wide variety of organizational patterns. There is, however, one striking similarity. The vast majority of our public schools use an age-graded organizational structure, especially at the elementary level.

Although it was common in the early one-room school for students of a variety of ages to be taught in the same classroom, the practice faded with the onset of larger schools that were set up in grade levels. Grade level placement became determined by the ages of the students (Cubberley, 1947; Goodlad and Anderson, 1983).

The organization of the American education system has not always been dominated by an age-graded structure. The graded school is a relatively recent educational development. Colonial America had no graded schools. Lack of an organized structure for schooling characterized this period. The home was the school and the kitchen, spare room or workshop was the classroom. When parents were unable to instruct their children, dame schools were available where instruction differed little from that found in the home. The teacher met with small groups of children, without regard to age, and taught them skills in reading and religion (Eby, 1952, p. 564).

The spirit of the dame school persisted long after its demise. In countless little red schoolhouses across the rural landscape, children of various ages attended a common school for instruction by the same teacher. In the emerging urban centers, the Lancaster Schools were the counterparts of the one-room rural schools. Both of these organizational patterns were destined to crumble under the pressures of increases in school enrollments. By the middle of the 19th century, urbanization was a reality. Between 1830 and 1860, the number of people living in communities over 8,000 more than doubled (McLaughlin, 1969), and the pressure for efficient school organization increased. Designing alternative patterns for school organization became a paramount educational objective.

Approximately 140 years ago, the system began its transformation from an ungraded structure to a fully age-graded structure (Martin, 1894, p.192; Shearer, 1899, p.20; Cowen, 1931, p.29; Cubberley, 1947, p.311; Goodlad and Anderson, 1963, p.44; Tewksbury, 1967, p.13). This change eventually spread to become a nation-wide standard. Even though there are variations on this structural model, schools organized on an age-graded structure are the primary reality within public education in this country (Goodlad and Anderson, 1963, p.2-3; Tewksbury, 1967, p.12). The majority of educators seem to have merely accepted the age-graded organizational structure as the way of instructing students within the system of public education (Cubberley, 1947, p.312). There are, however, indications that the tendency toward the unquestioned acceptance of the age/graded system may be changing.

A review of educational trends indicates that there is a renewed interest in the concept of multi-age grouping. The practice of educating students of different ages and identified grade levels together in the same classroom, although not new to

educational practice, appears to yield some benefits for students over the current single age/grade level organization that so dominates current practice. Multi-age grouping practices that were so commonplace in the one-room school house of earlier times have not been widely accepted as sound methods of organization in the current state of elementary education in America. A review of current research indicates that authors of some studies have found that students may gain greater educational benefits from this type of class instruction than from single age/graded instruction (Brown, 1989; Villa, 1989). Researchers also have found that teachers and principals are the key persons who bring about change in classroom organization and practice (Taylor, 1971; Holley, 1973).

If multi-age grouping is a practice that is desirable, then in order to gain wider acceptance and become more commonplace in schools, teachers will need to understand the hows and whys of this practice. Therefore, a description of how multi-age classrooms are organized for student instruction will be included in the study, along with a report of what elementary school teachers in multi-age classrooms say about the practice, the needs of students, and the instructional strategies they utilize that enable students of different ages and identified grade levels to have their instructional needs met in a single classroom.

Although there has been substantial research about the benefits and outcomes of multi-age grouping, only limited efforts have been made to report what experienced, multi-age group teachers say about this grouping practice in schools. In order to understand the dynamics of mixed-age grouping for instruction, it is important to describe both the current operation and organization of multi-age class groupings and the perceptions that experienced multi-age classroom teachers hold

about student learning, curriculum content and best instructional practices that maximize student learning.

The Purpose of the Study

The researcher's purpose in this study was to describe how multi-age classrooms are organized for student instruction and to report what elementary teachers say about their experiences with the practice. For purposes of this study, the term multi-age classroom will be used to describe an organizational pattern where students of different ages and/or identified grade levels are grouped together, in a single classroom, intentionally, for the purpose of providing effective student instruction. The focus of this study is on the classroom participants within an elementary school where multi-age grouping is reported to be a sound educational practice that enhances the academic and social skills of the students involved.

In order to examine the practice of multi-age classroom organization for instruction, and to report what teachers say about the practice, the following questions were asked.

1. How are multi-age classrooms organized for instruction and what instructional strategies are typically utilized in these settings?
2. How do teachers describe the operation of multi-age classes?
3. As a result of their involvement with multi-age classrooms, what experiences do participants report that have affected their viewpoints, attitudes, and understandings about student learning?

Significance of the Study

Concerned consumers, educators, critics, students and public officials recognize the increasing importance of a quality educational program. There is a renewed

interest in the idea that multi-age class grouping may yield benefits for students over the current single age-graded organizational system that so dominates American public education. There is evidence to suggest that multi-age grouping, with its accompanying instructional strategies, may improve the social skills of students and lead to a more humane, cooperative approach to instruction (Pratt, 1986; Way, 1981).

The research on multi-age grouping, referred to in the literature as multi-age grouping; nongraded classes; multi-grade classes; cross-age grouping; and family grouping (ERIC, 1989) documents that the practice of grouping students of various ages together yields some promising outcomes for students. In a study by Cloward (1967), older students raised achievement scores for previously low-achieving younger students through tutoring. In a summary of research from ethnology, education, anthropology, and history on the merits of multi-age classrooms, Pratt (1986) found that there were no more benefits derived from age-separate grouping compared to multi-age grouping. He did find some benefits of multi-age grouping in affective and social skill development of pupils. Way (1981) in a similar study explored the outcomes from instruction in multi-graded classrooms and compared these outcomes to those in single-grade settings. No significant differences were found in the areas of achievement, but the multi-age grouped students had higher self concepts than single-grade grouped children.

This brief summary of comparative research findings illustrates that multi-grade grouping may yield benefits for students in the affective domain. Observational studies on companionship outside the classroom provide further evidence of the importance of cross-age grouping. The general pattern that emerges from these studies is one of increased competition and aggression within same-age class groups

and increased harmony and acceptance within multi-age learning groups where younger members or high-need populations appear to benefit most.

Despite research in the field of child development that demonstrates children of the same age learn at different rates and in different ways, and despite evidence that multi age-grade grouping is a promising practice that may yield improved outcomes for students, the single-graded structure continues to dominate American public education.

Multi-age grouping may be an important tool to use to improve the quality of education. Information about how children learn, about learning styles, and about individual differences in learning rates seems to be in conflict with current grade level grouping practice and the child development literature; these differences appear to be worthy of investigation. An examination of alternative age-graded organizational structures might be a valuable area to examine for potential solutions to some of the identified problems within public education.

To understand more fully the multi-age classroom system, a description of the workings of this method of classroom order needs to be provided to teachers. It is recognized that the teacher is a key factor in educational change. The attitude of the teacher about the practice of teaching students of different ages together in the same classroom plays a significant role in the determination of the eventual fate of the practice (Goodlad, 1983).

Gathering information on the experiences teachers have that form their attitudes and beliefs toward mixed grade/age grouping can assist educators in identifying strategies to employ when exploring an expanded use of mixed age/grade classes. This information may also be of use to educators who are responsible for

preservice and inservice education programs for teachers. By examining instructional practice in multi-age classes and describing the underlying assumptions teachers in multi-age classes hold about the practice, a clearer picture of the needed content of teacher education and staff development programs may emerge. In effect, when students of different ages attend the same class, there are methodological concerns, but there is also need for a clear understanding of the attitudes of experienced multi-age class teachers and an understanding of the benefits teachers believe can result from multi-age groupings. The reorganization of grade level assignments, by itself, probably will not bring about better instruction. Therefore, included in this study is a report of what practicing teachers say about instructional strategies that are best used in multi-age settings. In addition, teachers that have expressed a commitment toward the use of multi-age grouping were asked to describe the experiences they have had and the values that they hold about the practice. Their answers to these questions are reported in this study.

There is substantial interest about the use of multi-age grouping as an educational practice. Educators are attempting to devise methods to increase the quality and quantity of the use of the practice. This effort is an important one that deserves attention on the part of those now working in the field of education.

Limitations of the Study

Most investigations are circumscribed. This study is not free from limitations. The methods used to gather data and the study site itself limited the scope of the study.

The type of community included is a limiting factor. The impact of community characteristics on the efficacy of the multi-graded school was not appraised as part

of this study. The more closely schools and communities approximate the study location, the more relevant the findings for their situation.

There is concern about replicability and generalization in ethnographic research. Because this kind of research takes place in a natural setting, instead of a controlled setting, the same conditions cannot be repeated. The same piece of research then cannot be duplicated. However, the same set of research questions that guide this project can be used to guide another project at a different site. In this way, other sites can be studied, and the findings can be related through common questions.

The findings reported in this study are limited by the degree that subjectivity or bias enters into the collection and interpretation of data. Although controlled by cross referencing of data collection sources and by checking observations and interpretations with other outside observers, the data collection and interpretation is still susceptible to some subjective judgement.

Another limitation results from the sampling procedures. The participants in this study are volunteers. Since the sample was not randomly selected, it is possible that it is not representative.

The class observations were conducted over a six-month period that covered the beginning and the end period of the school year. Clearly, practice changes throughout the year and from year to year. Since this study was conducted in a natural learning environment, the dynamics of the classes observed changed over time and practice was constantly evolving. The observation periods were scheduled to produce a cross section of the school day and of the school year. The findings may be limited by the types of experiences and the time of the year that were covered by

the observation periods.

Finally, the results of this study are limited by the fact that the school is purposely organized for educational outcomes, not for purposes of administrative convenience. The results may or may not be relevant to school situations where multi-age/grade organization is undertaken for purposes of administrative convenience, i.e., balancing class size, class sections or managing numbers of students.

Methodology

The research model used for this study was designed to gather data from first-hand sources, from the insider perspective, about the day-to-day operation of multi-age grouped classrooms. The rationale given for utilizing multi-age grouping, by currently practicing educators in these settings, was reported. For professional educators not familiar with the practice of multi-age grouping and the philosophy behind the practice, the outcomes of this study provide them with a picture of the setting, instructional planning, student interaction and staff experience as they perform their classroom duties. A summary of the reflections teachers had about their involvement in multi-age grouping, and how teachers came to believe in multi-age grouping as a valuable educational practice, were reported in the study.

In order to gather information about the operation and participants' perceptions of multi-age classroom practice, on site observation in a school that purposely utilized multi-age grouping for instruction was employed. Data for this study were collected from four sources. These sources were as follows:

1. Direct observation of students, staff, parents and volunteers in multi-age classrooms, with detailed field notes taken on the activities and verbal comments of the participants.

2. Formal interviews with teachers and administrators that have experience with multi-age grouped classes.
3. Written journal entries made by experienced multi-age group teachers.
4. Informal interviews with students, teachers, parents and support staff in the course of classroom observations.

A major source of data collection was done on site at Hill Elementary School (not the real name of the school) in Ann Arbor, Michigan. Staff at the Hill School have employed the practice of multi-age grouping for the past six years. The classroom settings observed had students of three identified grade levels and four different ages being educated together in the same classroom. During the observations, field notes were taken to describe in detail learning activities, daily lesson content, student comments, and teacher comments made during the course of the day. This source of data served as the primary basis for describing the daily operation of a multi-age class at the elementary level.

The formal interviews with teachers were conducted in a private setting. Teachers, support staff, and the building administrator were asked patterned interview questions about the practice of multi-age grouping, instructional strategies associated with the practice, beliefs and philosophy underlying the practice, and questions about how the multi-age group teaching experience has affected the educators' ideas about teaching and learning. The formal interviews also permitted the researcher to obtain information about student learning outcomes, student characteristics, teacher experience, and demographic data.

The journal writing was designed to enable teachers to reflect on their attitudes and values and how their ideas about teaching and learning have changed

as a result of experiences with multi-age group teaching.

Informal interviews with students, parents, teachers and support staff were used to check the researcher's perceptions. Informal interviews also were used to provide more detail about aspects of the setting or the instructional content. Informal interviews were used to check the objectivity of the observer and to verify observational data.

Definitions

The term "multi-age" is used in this study to describe a pattern of mixed age and multiple grade level grouping arrangements in elementary classrooms. For the purpose of this study, a multi-age class is defined as a class group within which students of different ages and identified grade levels are grouped together intentionally in a single classroom for the purpose of providing effective student instruction.

Multi-age grouping is but one term used in education literature to describe the practice of placing students of different ages and/or identified grade levels together for the purpose of instruction or for administrative efficiency. The terms inter-age (Weber, 1971), mixed age (Kurtz, 1964), nongraded (Carbone, 1961, Anderson, 1967, NEA, 1963, Hunter, 1964), ungraded (Dufay, 1966), primary units (Katz, 1989), mixed grade (Nachbur, 1989), split grade (Nachbur, 1989) combination (Freeman, 1984), continuous progress ungraded (Gillespie, 1974), multi-graded (Brown, 1989), and family grouping (Weber, 1971) have also been used to describe organizational patterns that group students of different ages together.

As part of a comprehensive examination of alternative grouping patterns in 1965, the National Education Association offered this definition of Nongraded

Schools.

> The nongraded school describes the vertical organization of the school that provides for the continuous, unbroken upward progression of all learners. Nongrading is a method of organization by which pupils are allowed to progress through school at their own individual rates. Each pupil covers as much of an appropriate curriculum as he can during the year. At the beginning of the next term, he picks up where he left off and again works at his own speed. No grade label is attached to the work at any point; there are no promotions and no retentions (NEA, 1965, p. 1).

Alfred Yates, in his book Grouping in Education, defines multi-age grouping as:

> ...a deliberate attempt to group pupils of different ages for instructional purposes. The spread is over several years and is far greater than would be found normally in the graded classroom. Such grouping aims at enabling older children to learn by helping younger ones, while the latter, in turn, profit from the stimulation of the older ones. Groupings are more natural approximations of family groups, and social growth and maturity are reportedly increased. Classes of this kind - usually described as family groups - have been introduced in a number of English primary Schools (1966, p.70).

Multi-age grouping, as described by Yates, most closely approximates the definition and terminology utilized in this study to describe the practice of grouping students of different ages together to enhance instruction. However, other closely related terms describe similar patterns of grouping.

Multi-grade grouping is defined by Brown (1989) as the grouping of students from two or more standard grade levels. In some instances, the plan is used as a means of providing an additional class where there is not a sufficient number of pupils for two sections of each grade level. Multi-grade grouping is also referred to as split grade or combination grouping since pupils from two grade levels may be

combined into a single class of standard size. In multi-grade classrooms, grade descriptors are often utilized to identify student levels. Frequently, teachers in multi-grade or split sections are expected to teach the grade level curriculum objectives to each of the identified grade level student groups simultaneously. Multi-grade grouping is often used to administratively balance class size.

Dufay (1966) defines ungraded schools, "As those where students are grouped together regardless of age and in which extensive effort is made to adapt instruction to individual difference" (p. 24). Grade levels as such are abandoned and within each class subgroups are formed to allow for a variety of academic standards. Others define ungraded plans as continuous progress plans that allow pupils to be grouped and regrouped, without regard to age or grade level, according to their ability or interest. Dufay goes on to describe ungraded, continuous pupil progress as

> ...a philosophy of education that promotes flexibility in grouping by the devise of removing grade labels, which is designed to facilitate the teachers role in providing for pupils' individual differences, and which is intended to eliminate or lessen the problems of retention or acceleration (1966, p. 24).

A pattern appears in the use of terminology that enables educators to describe at least three arrangements in the "gradedness" of American elementary schools today: 1) uncompromising gradedness; 2) nominal gradedness, where alternative age or grade grouping patterns exist but there is evidence of gradedness in the environment; and 3) ungradedness.

In theory, a graded school characterized by uncompromising gradedness follows a definite pattern or organization. The children are divided by age and attainment and taught as a homogeneous group performing at a set rate of progress.

Students who do not meet graded standards are failed and/or are retained. The idea of a gradedness (grade one, grade two, etc.) is central to the reporting system for student evaluation. Pupil progress is measured as below grade level, at grade level or above grade level.

Schools with nominal gradedness frequently utilize the literature descriptors of mixed age, mixed grade, multi-age, multi-grade, inter-age, inter-grade, split grade, cross class, combination or family grouping to describe the vertical organization of their class groups. Frequently students are identified by their grade label identity, even though two, three, four or more age and grade levels may be present in the same classroom. In classes exhibiting nominal gradedness, students frequently have the same teacher for more than one year. Varied methods of reporting pupil progress are utilized.

In schools that are ungraded, attempts are made to remove grade level labels. There are no grade identifiers assigned to student ages or progress. Therefore, the abilities and interests of children are determined, the groups are set, and instruction within classrooms is planned accordingly. Variations occur as a result of the children's rates of progress. Graded structure is either ignored as meaningless or replaced with age descriptors. Grouping patterns are flexible. Absent are grade labels (first grade, second grade, etc.), and the related machinery of promotion and failure. The reporting system is often consistent with the philosophy that each child is unique. In general, ungraded schools have taken to anecdotal reporting of student progress, reinforced by formal and frequent informal parent-teacher conferences. Nongraded reporting generally avoids symbolization of progress (letter grades of A, B, C, D) or references to age or grade normative data (at grade level, below grade

level, etc.).

A nongraded or ungraded school as defined by Miller is characterized by

> ...one without grade failure or retention, it has individualized instruction with the purpose of permitting youngsters to progress as they - individually - show competence to do so (1967, p. 131).

The description provided defines "gradedness" as a continuum of organizational patterns, from strict age grouping in grades to flexible organization by interest and ability. The essential difference between these variations on gradedness is the degree of belief in the concept that a specified body of information can and should be a standard of learning for all or most children of a comparable age.

A review of terminology used to describe various aspects of gradedness demonstrates that there are numerous terms used to describe graded or ungraded patterns of school organization. The term multi-age grouping is used throughout this study to describe the form of nominal gradedness employed at Hill School. Certainly at Hill School, the multi-age class organization is but one aspect of the total educational program.

At Hill School, as in many other settings, nominal grading is more than just grouping. It is a redefinition of teaching. It demands differentiated instruction for students according to their learning needs rather than conformity to a single instructional timetable for students born during the same year.

In this multi-age setting, alternatives to strict gradedness replaced certain organizational rigidity with flexibility. This alternative age/grade grouping permitted, but did not guarantee, a transfer of some of the decision-making in regard to instruction from grade-standard curriculum guides and rigid schedules to teachers and

students. Efforts by a faculty at Hill to alternatively grade the school were part of an over-all commitment to the ideal of individualized instruction.

M. Hunter (1964) described the changes that can occur in connection with a modification of traditional age-graded grouping and the selecting of an alternative plan. This type of change included the following considerations, according to the author:

> ...forces educational decision-making that takes three important considerations into account: the teaching style that most successfully motivates, the peer group that most successfully stimulates, and the educational opportunities that most successfully advance the learning of each child (1964, p. 82).

The key to examining the effectiveness of school gradedness or ungradedness was not the specific organizational pattern, but rather the instructional methods and teaching strategies that resulted from the organizational pattern. An examination of what alternative grade configurations or the elimination of grade configuration did to help teachers instruct students differently and to improve student learning outcomes formed the rationale for the study of nongraded and mixed age/grade patterns. In a report by William McLaughlin, he stated that:

> Modifications in organizational patterns, grouping practices and staffing designs simply are incapable of improving instruction. These changes do not automatically liberate an indefinable force presumed to be penned up in students, teachers and principals.... Alterations in instructional strategies, not organizational patterns, must be given priority, without this, differences in student attainments are reasonably unlikely (1969, p.24).

Strict gradedness frequently had with it a set of expectations and operations that may be have limited the instructional strategies that teachers employ. In the

next chapter, research about the instructional strategies that are associated with multi-age grouping and other nominal or ungraded alternatives is examined. These instructional strategies and practices are significant descriptors of the differences between traditional graded grouping and alternative age/grade class grouping arrangements.

Organization of the Study

The information in Chapter I has included statements which indicate the researcher's purpose for conducting the study and the significance of the study. The findings of a literature review on multi-age grouping and related research topics are presented in Chapter II. The research methodology utilized in this investigation is presented in Chapter III. The findings from the data gathering process utilized in the study are presented in Chapter IV. Some conclusions and recommendations, which seem appropriate to the results of this study, are presented in Chapter V, along with suggestions for further study.

CHAPTER II

REVIEW OF THE LITERATURE

The information obtained from a search of the literature on age/grade organization is presented in this chapter. The topic headings utilized to organize the data are: Historical Perspectives, Issues Associated with Single Age/Grade Grouping, Instructional Methods and Outcomes, Teacher Attitudes Toward Multi-Age Grouping, and Summary.

Historical Perspectives

Although ungraded and multi-age grouping methods and the associated instructional practices have been employed in the past and have been shown to yield promising results, there has been a tendency for educators in 20th century American schools to use large-group, whole-class instruction, and single-age grouping as primary methods of organization for instruction. An examination of the history of age grouping practices provides some insight into why current practice has evolved into a predominantly single-age/graded system that utilizes large-group instruction methods.

The graded school system, in which students are grouped by their age, is a product of another century and another culture. According to Howard and Bardwell (1966), the practice of grouping students by age was devised by the Prussians as a

method of preparing young people for an authoritarian, militaristic society. Howard and Bardwell state that,

> The graded system was imported to this country in 1848 through the Quincy Grammar School of Boston, which opened its doors at the time. The practice grew as our population grew and it became necessary to accommodate large numbers of students in our schools. It has been a popular system primarily because it is easy to administer (Howard, 1966, p. 11).

Prior to the introduction of the graded Prussian model there existed a variety of ungraded schools with different instructional purposes.

According to Frank Eby in The Development of Modern Education,

> At the beginning of the 19th century, there existed a variety of schools to teach different things. The vast majority of these were one-teacher schools to teach reading and religion. In cities like Boston, there were, in addition, more advanced schools of three kinds: (1) Latin grammar schools, (2) English grammar schools, and (3) writing schools in which expert penmanship and arithmetic were taught. Until well into the century, these schools were ungraded and the curricula limited. Individual instruction was the rule everywhere, and dependence on the textbook was universal. In the Latin schools, pupils were classified by their stage of advancement in reading Latin classics and in grammar, but in the English grammar schools and the writing schools, grading had not yet been introduced (Eby, 1952, pp.564-565).

Tewksbury, in Nongrading in the Elementary School, states that prior to the middle 1800s:

> ...the predominant plan was the one-room school in which instruction was nongraded. In this early type school, there were children of various ages in the one classroom, and achievement levels varied a great deal. Instruction was differentiated, that is, the teacher gave different assignments to different children. While one child or several pupils did certain work in a subject, others who were ready for more advanced study were

> assigned such work by the teacher. Thus, a number of different levels were being studied simultaneously by pupils in the same classroom. Classes were often smaller than the typical class of today (Tewksbury, 1967, pp.12-13).

William Shearer presents, in The Grading of Schools, a statement by J. C. Boykin which describes the ungraded system of the time. Boykin stated that,

> In the first part of this century, the grading of elementary schools was a thing unknown in this country. Instruction was almost wholly individual. Whenever a pupil chose to present himself for admission into school, no matter at what time of the year, he was received. His studies were determined by the books he brought. His first lesson was apt to follow the last one that his former teacher had given him. If he had been through Webster's "Blue-back" Speller twice and had finished the last column of the tenth page, on the third round, the first column on the eleventh page would naturally be the first lesson that his new teacher would give him. If a class already formed had reached just that point, he was put into that class. Otherwise, he would probably form a new class. It was thus by no means uncommon to see a dozen or more classes in the same room studying the same book, but at a dozen or more stages of advancement in it; and, altogether, a teacher with a school of moderate size, containing pupils of all ages, sexes, and sizes, might easily have fifty or sixty classes. Attend to them all? Certainly; but what attention! The little fellows received but little of it; especially those who had learned to read. Their lessons would be heard every few days. The teacher's pet classes were called to the recitation bench often; and his favorite subjects received nearly all his attention. The rest of the school whiled away the time as best they might. They "did their sums" on their slates, or droned over their "blue-backs," until they were tired, and then turned their attention to each other and to mischief, opportunities for which frequently appeared in the open mouth or bare soles of the sleeping pupil (Shearer, 1899, pp.11-13).

An advancement which preceded the fully-age-graded school was the monitorial school developed by Lancaster and Bell. Bayles and Hood describe the

system out of which the monitorial schools developed,

> ...prior to the monitorial schools, elementary-school practice had been essentially that of the one-room rural schools that are well within the memories of many adults living today. It was individualized instruction (even possibly programmed because each child had his book which he followed minutely), each child going as fast as he could and reporting (reciting) individually to the teacher (Bayles and Hood, 1966, p.130).

The monitorial school developed by Joseph Lancaster was a step forward in the development of the age-graded structure in education. The Lancasterian system was the first organized system to utilize an approach to education where the master dealt only with a small group of pupils (Cubberley, 1947, pp.131-132; Bayles and Hood, 1966, p.130). The master taught the best pupils and then it was these pupils, called monitors, who worked directly with the rest of the pupils in the school. The efficiency within this system resulted from the large body of pupils being divided into small groups, under the direction of a monitor, with a set series of knowledge units to be acquired. Movement from a lower group to a higher group was dependent on the pupil demonstrating acquisition of the required knowledge (Cubberley, 1947, p.131-132; Monroe, 1971, pp.366-367).

Small group recitation replaced individual recitation under the Lancasterian system of education. Monitor time for instruction greatly reduced direct teacher instruction time and the cost of education was reduced enormously. The monitorial system of Joseph Lancaster was considered an ideal way to deal with the problems of educating the children of the poor. The philanthropic societies and other interested social groups saw, in the monitorial system, a way to provide the poor with a required educational background and, perhaps, more importantly, a much needed

system by which the moral character of the children could be trained in the appropriate manner (Monroe, 1940, pp.363-364).

In a review of school reorganization in the 1800s, Bunker points out that

> ...primary schools in Boston, from the time of their establishment (1818), had been conducted on the "ungraded plan" - that is, the unit group taught by each teacher was a separate and independent organization, occupying a separate building, usually of one room. The course of instruction was divided into six steps or classes, but each teacher had all six classes in her room at the same time. She was fitting a class for the grammar school, teaching a class of A-B-C-darians, and carrying on the intermediate stages of the course, simultaneously. This arrangement was gradually changed by carrying down into the primary schools the "graded plan" of the grammar schools. This led to the promotion of pupils, every six months, from one primary teacher to another; which, at that time, meant transferring from one primary building to another (Bunker, 1916, p.30).

The ungraded school did not measure up to the important requirement of the greatest good to the greatest number, in the shortest time, at the least expense (Shearer, 1899, p.23). The common school reformers believed that,

> ...the absence of grading and uniform schoolbooks had greatly reduced the efficiency of the district schools. The reform movement's economic feasibility required that children move through the common school rapidly so as to free space and teacher time for more children. The reformers considered that widespread establishment of age-graded schools was one of their prime accomplishments (Church and Sedlak, 1976, p.59).

Multi-age grouping practice was described in literature that recounted the development of the first fully age-graded American school, the Quincy Grammar School in Boston, Massachusetts, in 1859 (Shearer, 1899, p.20; Tewksbury, 1967, p.13; Ignaz and Corsini, 1979, p.25). The development of the Quincy Grammar School, shaped by the efforts of George Emerson, John Philbrick, and Horace Mann, was

based on the belief that homogenous grouping and large group instruction would improve the instructional practices of the day. Fredrick McClusky presents, in The Elementary School Journal, a statement by George Emerson in 1839 which describes the rationale and planned workings of the single-graded structure.

> ... What I desire to aim at in this plan is this, that, as far as is possible, all who are at the same point in their studies and progress, should be together, under the guidance of one teacher and they only should be present, for illustrations on the blackboard and all other direct instruction may be given to a whole school at once, as well as to a single scholar, and if any others than the class are present, they are an interruption to the teacher and are themselves interrupted by him. ... If all in the same apartment were of one class, and under one teacher, and with the same lessons to learn, much more might be done, and better done, and in a shorter time. Under such an arrangement, the difficulties of government would be nearly annihilated, short sessions would take the place of long sessions, and time would thus be gained for healthful exercise and recreation in the open air.
>
> Another advantage would be that the desire for advancement from one grade of school to another would be a healthful stimulus to exertion, and might take the place of personal rivalry - the most pernicious evil, which now exists in schools.
>
> Another advantage would be, that the progress of a child from beginning to the end of his course would likely be onward (McClusky, 1920, p.144).

With these beginnings approximately 140 years ago, the system of school organization and instructional practice began changing from an ungraded structure to a fully age-graded structure (Shearer, 1899, p.20; Cowen, 1931, p.29; Cubberley, 1947, p.311; Goodlad and Anderson, 1963, p.44; Tewksbury, 1967, p.13). In recent times, most educators have merely accepted the age-graded organizational structure as the way of doing things within the system of public education. This attitude of

acceptance can be seen in statements by historian Ellwood P. Cubberley. He states that:

> We merely evolved, as a result of something like a half-century of gradual educational development, the common and purely native American elementary school which we have known for so long. The primary classes, in part due to the pressure of numbers, gradually ceased to take pupils earlier than five, and later, earlier than six, outside of New England, and the present eight-year elementary school (nine in New England), with a teacher for each grade, was evolved. ... This evolution was fully accomplished by 1860 in all Northern States (Cubberley, 1947, pp.312-314).

It would appear that efforts to modify significantly the age-graded organizational structure have been generally unsuccessful except on a small scale. However, the belief that change in this organizational structure within public education is needed is not new. It has been supported almost as long as the age-graded structure itself. William J. Shearer identified, in 1899, a rationale for modifying the age-graded organizational structure:

> Though the graded school has many advantages, we should not close our eyes to the fact that it is open to the serious charge that it does not properly provide for the individual differences of the pupils; that it is not sufficiently pliant to accommodate itself to the pupils, but demands that the pupils accommodate themselves to it; and that grading, which was intended to serve the children, has now become the cruel master (Shearer, 1899, pp.23-24).

Shearer further points out that:

> In a late issue of The Educational Review, Dr. Prince, Secretary of the Massachusetts Board of Education, speaks as follows on this subject:
>
> > There is no question of school organization at present more important than that of a proper adjustment of

> conditions to the needs of individual pupils. The assumption upon which most courses of study seem to be based, that just so much ground must be gone over with equal thoroughness by all pupils in the same time, is the greatest bane of our public school system (Shearer, 1899, p.95).

The age-graded structure, in light of its longevity, has been based, for the most part, on a very simple rationale that has not required much in the way of modification. The essential simplicity of a rationale which emphasized "the greatest good to the greatest number, in the shortest time, at the least expense" (Shearer, 1989, p.23) would make modification a rather difficult task.

As the idea of grades became more ingrained in educational thinking, textbooks were rigidly prescribed by grade level. Each child of the same age was expected to come up to the same standard, no matter what the student ability or interests were. Accompanying the cries for flexibility in the age graded structure came a number of efforts to find alternatives to graded school structures. These alternative approaches to schooling, as described by Robert Anderson, have mostly been forgotten.

> The lessons of over a century to find more humane and effective options to gradedness (notably John Dewey's laboratory school, the various strands of progressive education that followed, the Dalton Plan, the Winnetka Plan, activity schools, ungraded primary programs in Wisconsin, nongraded elementary and secondary programs, open education) have lost momentum (1987, p.45).

However, Anderson and others cite some recent studies that suggest that nongradedness remains alive. They advocate massive new efforts to revitalize and extend multi-age pupil groups. Anderson (1987) advocates a revitalization of the

Individually Guided Education (IGE) ideas of the 1960s and 1970s as a starting point.

> The essential organizational structure, with which thousands of schools have already had some experience through Individually Guided Education and similar excellent plans, would feature a combination of non-gradedness, multi-age pupil groups, cooperative teaching and flexible, shared space (1987, p.45).

IGE was one major national attempt to introduce an alternative to traditional schooling that contained, as a major component, multi-age classroom grouping. In a research paper by Wiersma, he outlined the components of an IGE school:

> Individually Guided Education is an educational innovation developed during the late 1960s and early 1970s, that originated at the Wisconsin Research and Development Center for Cognitive Learning. It is one of the few innovations that was scheduled for national implementation. The conceptual origins of IGE have their roots in educational psychology with a behavioristic approach to learning. As an alternative approach to schooling, IGE involves differentiated staffing, multi-aged grouping of children, and the direct involvement of the principal in the planning, implementation, and evaluation of the instructional activities of the school. During the late 1970s a study of the programs found that the three strongest surviving characteristics of the approach were teaming for instruction, shared decision-making, and programming instruction to meet the needs of the individual students. It was determined that the early success of the approach can be attributed to its sound conceptual base, the comprehensiveness and definition of its components, and the fact that it is not an add-on innovation, but an alternative to traditional schooling (1986, p.150).

Although a number of models for the successful implementation of multi-age grouped instruction exist, the age-graded system has been consistently resistant to change. Some reasons for the lack of widespread alternatives to the graded system are reported by John Goodlad in "A Study of Schooling: Some Findings and Hypotheses,"

> Teachers teach as they were taught. They employ the techniques and materials modeled during their 16 or more years they were students in schools. Relatively late in this learning through modeling, they experienced a modicum of professional preparation to teach - presented largely in the same telling mode to which they had become accustomed. Probably the most significant part of this professional preparation was the student teaching, during which the neophyte practiced under supervision what he or she had previously observed teaching to be. The future teacher probably talked and read about alternative teaching practices (such as those advocated by John Dewey) but had no opportunity to practice them. Moreover, as part of the early socialization into teaching, he or she probably came to realize that a job would depend more on the mark received for student teaching than on the mark for a course in educational philosophy or psychology.
>
> Professional education is intended to immerse the neophyte in the state of the art and science of teaching and simultaneously to separate him or her from the myths and anachronisms of conventional practice. Teacher education appears to be organized and conducted to assure precisely the opposite (Goodlad, 1983, p.469).

Goodlad adds that:

> Teacher education programs fail to separate teachers from what they have come to perceive teaching to be. Their formal and informal experiences as teachers and the messages they receive from the internal and external context of schooling all conspire to reinforce the status quo. The cards are stacked against innovation.
>
> The irony is that every statement of goals for schooling - whether those we extracted from official state documents, those formulated by legislative committees trying to define basic education, or those put together by parent or teacher groups - is broad and comprehensive in its implications for classroom practice. Yet pedagogy and curricula are geared, it appears, to only a small fraction of these goals - to the lowest common denominators. Schools and those who work in them are not chastised for perpetuating this discrepancy. Rather

> they are reinforced for doing so and run a serious risk of censure if they try to do otherwise (Goodlad, 1983, p.470).

Many educational leaders recognize that putting materials in the hands of teachers, providing inservice training programs, and designing alternative organizational arrangements do not necessarily induce changes in schools and classrooms. The observations of 158 elementary classrooms led Goodlad and Klein to conclude, "Many of the changes we believed to be taking place in schooling have not been getting into classrooms; changes widely recommended for the schools over the past 15 years were blunted on the classroom door" (1970, p.97).

In a study of the Gary, Indiana schools between 1940 and 1970, McKinney and Westbary (1975) found that little change in practice occurred even when detailed plans for bringing about changes in social studies, science and vocational education were designed and shared in print. McKinney (1975) cited a lack of new texts, facilities and equipment, a lack of teacher retraining, and a lack of community and administrative support for the changes as reasons for substantial differences in what teachers taught and what students learned.

Taylor (1974) asked teachers how they obtain information on what and how to teach in their classrooms and who influenced their teaching. The major influences they reported were local professional ones: their principal, colleagues, and the superintendent of schools. Parents, the school board, pupils, formal training programs, and all influences from outside the community, including journals and textbook guides, were listed as having less influence. National reports, foundation studies, and the U.S. government agencies were reported to have the least influence on what teachers taught.

The overall picture emerging from Taylor's study is of a nearly autonomous classroom teacher who is surrounded by an enormous number of complex outside influences but is largely insulated from all but the most immediate. The school administrators appear as the persons most exposed to outside influences and also as the most able to influence the teachers (Taylor and Reid, 1971; Holley, 1973).

The studies cited are only a sample of those published, but they suffice to show quite convincingly that there are severe problems in getting any programmatic changes into schools and classrooms. They also show that student grouping, instructional method, and curriculum content decisions are made almost exclusively on a local level, primarily at the building level, and that large scale teacher inservice, formal university training, professional journals, community pressure groups, national reports, large organization recommendations, prescribed district curriculum documents and government agency recommendations have little influence on what occurs in classrooms.

Howard reviews other obstacles to the implementation of nongraded programs.

> Many efforts to break the stranglehold that graded organization has had on the development of wholesome and adequate programs of continuous learning progress for young children in our public schools have been blocked by (1) the shortage of available materials and (2) the organization of materials by major publishing firms. Limited funds in most public schools made it impossible for administrators to provide teachers with enough materials to break the lockstep of graded organization and provide each child the opportunity to work in materials that were the most appropriate to the child's maturity and learning rate. The materials available were poured into the graded mold by the publisher for easier packaging and marketing. The result was to make it nearly impossible for the school

> administrator and the teacher to change the organization or the curriculum of the school (1966, p.15).

The emphasis seems to be that what worked in the past will continue to work in the future. Current practice, in the main, continues to emphasize the uniformity and standardization of the age-graded organizational structure. The rationale of efficiency based on the simple concept of "the greatest good to the greatest number, in the shortest time, at the least expense" continues within American public education.

Issues Associated with Single Age/Grade Grouping

The most common practice of school organization in American schools is that of the age-graded structure. The age-graded structure has endured for almost one hundred and forty years with its underlying rationale apparently not having been viewed as an important element in the study of the development of the American education system.

According to Owen,

> It would appear that there have been no significant modifications to the original underlying rationale for the age-graded organizational structure within public education in this country. The literature shows that there have been movements to modify the system's organizational structure since before the end of the nineteenth century. However, in light of the fact that the age-graded organizational structure is still the predominant form within public education, the original rationale appears to be as strong now as it was in the nineteenth century (Owen, 1987, p.74).

The changing of age grouping in schools, from the one-room, ungraded community schoolhouse structure, into single age-graded classes, evolved during a period from 1859 to 1975. An historical perspective offered by Courtage, Joben,

Stainback and Stainback (1985) states that most educational systems utilized an age-graded system to address the needs of most students by developing an efficient approach to group instruction. This age-graded organizational structure is based on three assumptions:

> That students of the same chronological age are ready to learn the same objectives.
>
> That students require the same amount of time (i.e., an academic year) to master predetermined content.
>
> That students can master pre-designed objectives for a grade level for all curricular areas at the same rate. (p.143)

Stainback (1984) holds that as a result of these assumptions, those pupils whose educational needs do not match this age-graded structure or who otherwise interfered with the regimental flow of instruction are either excluded from school or placed into "special" classes or schools, thus creating sub systems that are isolated.

Stuart Dean (1965) described the graded organizational practices in schools as systems that ignored some of the important factors that govern and influence instruction. He spoke in favor of practices that promote "...flexibility and fluidity...nongradedness, multi-gradedness or some other flexible arrangement. If we believe in and are committed to a doctrine of individual differences - the range of human variability - then our methods of organizing the educational program must operate to support this conviction" (1965, p.1).

A statement endorsed jointly by the American Association of School Administrators and the N.E.A. (1960) points out the conflict between the need to provide for the individual student and the graded plan organization:

> Many school practices need re-examination; and the assumptions underlying them and their effects need careful scrutiny. Among these practices may be listed the following: graded organization, although this plan of grouping children by the "ladder" concept - changing one whole rung once each year - is almost a universal practice, the need for re-examination of this plan is obvious when it is viewed in the light of individual differences (1960, p.7).

Howard (1966) explains the false assumptions underlying conventional single-grade grouping processes:

> The graded school is based on false assumptions regarding the learning process.
>
> The first, and perhaps the most obvious, is the assumption that all students in a class learn at the same rate. It is common practice in the graded school for the teacher to give a specific assignment to everyone in a class to be completed in a specified period of time. Examinations are invariably given to everyone at once. The result is that less able students fail to "keep up" with the group, and the most able students are held back. Following the examination, the entire class usually proceeds to the next unit of work in the sequence - even if some members of the class are not yet ready for the more advanced work. The lockstep of pace dooms the slower learner to failure and the more able student to superficiality, boredom, or both.
>
> A second false assumption, closely related to the first, is that the same subject matter content is equally appropriate for everyone in the class. Although we know that this is not true, we continue to give assignments that are the same for everyone. The student who becomes interested in a topic and wishes to pursue it in depth is penalized. If he is freed by his teacher from the "regular" work, he is faced with a gap in his curriculum that will place him at a disadvantage at examination time. If he is not freed from the usual requirements in order to pursue his interest, he is faced with twice as much work as others in the class. Thus, students soon learn that school is not a good place in which to pursue their interests (1966, p.11).

In their 1987 report, Knoblock and Berries offer evidence that the current age-graded systems may be promoting failure. According to Knoblock (1987):

> Where public education fails to address the needs of children - whether they are described as being gifted, typical, or disabled - this failure might properly be traced to the erroneous assumption that an invariant, singular curriculum can serve all children. Schools must adapt, expand, and individualize curricula and programs to insure that serious and sincere efforts are made on behalf of each child (1987, p.4).

In order to make general education classrooms accessible to more students and to maximize student learning, it is important that organizational trends in schools that hamper the ability of school personnel to educate students of varied needs together be examined.

Many authors of studies have criticized schools for being seriously out of phase with the rest of society. James Coleman (1966) argues that schools should reexamine their character and provide diverse experiences for our current diverse population. Current increase in the diversity of student populations in classrooms lends itself to a multi-age organization, according to Goodlad and Anderson (1989). These authors raise questions about the efficacy of age-graded organizational structures that so dominate schools, and the effectiveness of single age grouping for dealing with developmental differences among children. John Goodlad and Robert Anderson, in The Nongraded Elementary School, state that:

> The realities of child development defy the rigorous ordering of children's abilities and attainments into conventional graded structure. For example, in the average first grade there is a spread of four years in pupil readiness to learn as suggested by mental age data. As the pupils progress through the grades, the span in readiness widens.

> Furthermore, a single child does not progress all as one piece: he tends to spurt ahead more rapidly in some areas than in others. Consequently, a difference of one grade between his reading attainment and his arithmetic attainment at the end of the second grade classification may be extended to a three- or four-grade difference by the end of his fifth year in school. The presence of the graded structure may disguise or distort such realities but it cannot remove them (1963, p.3).

The authors go on to explain that:

> Our central problem, then, emerges out of the conflict between long-established graded structure on one hand and increasing awareness of variation in children's abilities and attainments on the other. Our graded structure and parent-teacher-pupil expectations are long established; they represent a certain antique respectability (1963, p.4).

This point of view, when contrasted with the findings of the major educational reform reports of the 1980s would seem to establish an important difference which bears investigation. The major reform reports do not emphasize that the age-graded organizational structure might be a valuable area to examine for potential solutions to the identified problems within public education. However, one of the recommendations found in A Nation At Risk does offer insight into the need to review the practice of grouping by age. Recommendation C, number 8 suggests that:

> Placement and grouping of students, as well as promotion and graduation policies, should be guided by academic progress of students and their instructional needs, rather than by rigid adherence to age (National Commission On Excellence In Education, 1984, p.76).

This recommendation, when combined with the findings of Goodlad, Anderson and others, points to the suggestion that the practice of rigid grouping by age and grade may indeed be a barrier to meeting the goals of equity and excellence in schools.

In her 1985 report, Leona Tyler summarizes her proposal for reorganizing American public education:

> Public education is facing a crisis of major proportions, but the things that are basically wrong with schools are not those being emphasized in current proposals for change. This paper identifies two basic defects in the American system of public education: (1) there is too little attention to individual differences; and (2) there is too much compulsion. Because of the wide range of abilities among children, the U.S. system of organizing schools by age groups is perhaps the worst possible strategy for maximizing the learning of individuals. This system, along with the "social promotion" that almost necessarily follows, results in widening gaps between students, disillusionment of those who lack the basic skills to build on in the higher grades, and boredom for the gifted students. Problems of classroom management that are customarily blamed on teachers or students are actually the fault of this "lockstep" age-grade system (1985, p.7).

Today most schools group students in graded systems by chronological age (Slavin, 1987). In some schools, children are further sectioned according to IQ scores, reading achievement levels or other measures of ability. This practice of ability grouping or tracking is widely practiced, according to Baker (1961) and Slavin (1987). Other differentiating factors, such as teacher preference, gender, interest, friendship or behavior are also used as a basis for grouping students. When pupils who share some similar characteristics are placed together, the practice is called homogeneous grouping. The most widely used form of homogeneous grouping is school organization by age-grade classrooms, yet educators rarely use age grouping as an example of homogeneous grouping.

In describing the problems with homogeneous age grouping, Madeline Hunter offers this scenario.

> In a graded school each child is labeled with a tag denoting the average number of years children in his class have been in school. These tags carry certain expectations. Thus, a fifth-grade label on a child is matched with the same label on books. The child is expected to read state-adopted textbooks for grade five; he is expected to be learning about the United States; and he is expected to be able to do fractions. Whether he is one, ten, or eleven years old, whether his intelligence quotient is 80 or 180, this is what he is "supposed to do" (1964, p.82).

In homogenous age graded classes, possibly the wrong questions are being asked. For example, rather than asking, What are third grade children supposed to do? a more appropriate approach might be to ask, What learning opportunities are most appropriate for this child? Depending on the child's need, the pupil may review basics in mathematics, practice addition combinations, or display knowledge of common fractions.

In Hunter's assessment, the likelihood that teachers will provide appropriate learning activities for each child's need is greater in a mixed grade group than in a graded group. She states that "...in a graded group, it is possible for many teachers to avoid their responsibility for providing appropriate learning opportunities. In a nongraded group, teachers are forced to assume their responsibility" (1964, p.83).

According to Hunter, many single age grouped, grade level classrooms base instruction on a lockstep whole group learning model because of some underlying assumptions teachers in these single age graded settings hold about student abilities and societal expectations of teacher performance. She believes these underlying assumptions create some of the problems with graded classrooms, including a tendency to ignore individual differences and the ignoring of research on how inappropriate or incomplete learning can interfere with previous and future learning.

Hunter also states that:

> ...there is a considerable amount of time wasted in graded classes because children who have attained an objective have to wait for the rest of the group to catch up. Those who do not catch up are frequently labelled as failures and/or kept in the same grade for another year. Grade retention has been demonstrated to be harmful to children both in terms of their achievement and self concept.

In a description of how single-age gradedness contributes to grade retentions and failures, Collier states that:

> ...failing a child in the elementary grades is "almost criminal." However, such things happen all the time because American education remains shackled to the graded school concept which over the years has become an end in itself while limiting the school's basic function of educational development (1966, p.32).

Instructional Methods and Outcomes

In the following section information is presented that describes how multi-age grouping practices, with their accompanying instructional strategies and classroom organizational systems, affect educational outcomes for students.

Some research findings indicate that instructional methods employed in multi-age classes yield promising outcomes for students in both the cognitive and affective domains (Pratt, 1986; Way, 1981). In a comparative study of multi-graded and single-graded classrooms, Veenman and Simon (1987) found no significant differences in achievement between the groups. They did conclude that teachers felt working with multi-graded classrooms was more difficult, due to the fact that most teachers reported teaching the class as if it were multiple classes, with separate content material taught to each grade level group in the classroom.

A summary of comparative research reveals that grouping by single age or

single grade levels yields no advantages for students in the areas of subject matter mastery over multi-age groupings (Veenman and Simon, 1987; Pratt, 1986; Way, 1981, Raschke, 1988). On the other hand, multi-grade groupings appear to yield benefits for students in the affective domain without adversely affecting student achievement (Pratt, 1986; Way, 1981; Wakefield, 1979). Observational studies on companionship outside the classroom provides further evidence of the effectiveness of multi-age grouping. The general pattern that emerges from these studies is one of increased competition and aggression within same-age class groups and increased harmony and acceptance within multi-age learning groups. In these studies, summarized by Pratt (1983), younger members or high-need populations appear to benefit most.

In an experimental study conducted in New Brunswick, Canada, Brown (1989) compared student achievement in single grade and multi grade classrooms and found that there were significant differences in academic achievement between students in multi-grades and their matched counterparts in single grades. However, only 20% of the comparisons favored the single grades and 80% favored the multi-grade classes using a comparison of teacher reports. Brown found similar findings when comparing academic growth of the two groups on a Canadian Test of Basic Skills (CTBS). A comparison of CTBS results indicated that 87% of the progress comparisons in basic skills favored the multi-grade classes, while only 17% of comparison items favored the single grade class.

Veenman (1985) conducted a study that compared time-on-task behavior between third and fourth grade pupils that were in multi-age and single-age mathematics and language arts classes. He found that there was no difference in

time-on-task significant behavior between the single age and mixed age groups. Students in the mixed age classes spent more time working individually.

In a book about nongraded school plans by John Goodlad and Robert Anderson, the authors observe that,

> ...Enthusiastic respondents attribute to nongrading a reduction in tension for slow-learners, a lessening in boredom for the academically talented, and improved classroom behavior. Dissenting parents and teachers are few. It might be concluded that most persons associated with nongraded schools are happier for having them. For a time, at least, until rigorous research designs and studies employing them are available, the promise of nongraded schools will continue to be appraised on the basis of their perceived contribution to human welfare (1963, p.60).

Robert F. Carbone conducted an investigation of the relative effectiveness of graded versus nongraded schools through a controlled, matched group experimental design. His leading conclusions, in summary, are:

> (1) There was no evidence to indicate that pupils who had attended these nongraded primary schools achieved at a higher level during their fourth, fifth, or sixth years of school than pupils who had attended these graded schools. On the contrary, the differences were all in favor of the graded pupils; (2) in four out of five mental-health factors there is no significant difference in the adjustment of these graded and nongraded pupils; and (3) teachers in the nongraded schools appeared to operate much the same as teachers in the graded schools.
>
> The implications of these findings are clear. First, it is not realistic to expect improved academic achievement and personal adjustment in pupils merely on the basis of a change in organizational structure. Second, the attainment of high pupil achievement and good mental health is not a unique result of nongrading. The evidence presented here indicates that these goals can also be attained in an elementary school organized under the conventional graded system.

> A third extremely important implication is suggested lest readers see this evidence as an indictment of the whole concept of nongrading. It seems clear that if any new form of school organization is to produce the benefits that its advocates envision, it must be accompanied by appropriate adaptations in the instructional practices of teachers. Changes in organizational structure alone are not enough (Carbone, 1961, p.82).

A study to determine whether there would be a significant gain by primary grade pupils after a variation of the nongraded primary unit had been introduced was conducted by Joseph W. Halliwell. As background to his investigation, Halliwell reviewed and summarized relatively similar studies by Provus, Morgan and Stucker, Skopski, Ingram, and Hart. In general he observes that the results drawn from these earlier studies are inconclusive. He comments, "This summary of research indicates that the problem of assessing the value of nongraded programs is quite complex and that much more research will be needed before such programs can be evaluated with any degree of validity" (1963, p.64).

In his own research, comparing the spring achievement test scores of 149 graded and 146 nongraded first, second, and third grade pupils in a school which gradually introduced nongradedness over a two-year period, he found that "nongraded approach to the teaching of reading and spelling was quite effective and is worthy of further investigation" (Halliwell, 1963, p.64).

In his book, The Ungraded School, Richard Miller draws the following research-based arguments for and against nongraded schools. He summarizes the advantages of nongraded schools:

> Although nongraded schools have not yet been proved conclusively to be superior in helping children to achieve more, many persons are enthusiastic about other

benefits which they claim are due to nongrading. The first and most obvious advantage of nongrading is the elimination of the serious problem of whether to promote or not to promote. This problem has been debated over and over - whether to keep children with others of their age group even when they are far behind in the work, or to make them repeat a grade, hoping they will understand the material better the second time around. Research studies generally show that children do no better the second year in a grade than they did the first and sometimes do even worse. The nongraded plan provides an alternative to the pass-or-fail dilemma. Since the pressure is off the children and their teacher for covering a certain amount of prescribed material each year, that nongrading results in happier children and less harassed teachers.

Another argument in favor of nongrading is that it is a method of organization better adapted to the democratic ideal of concern for the individual. Nongrading also is compatible with what has been demonstrated in programmed learning sequences, that sound learning is cumulative and that pupils learn better when they do not repeat or skip over what is misunderstood but have the time to work at a level of any particular subject until they have mastered it.

Another advantage claimed for nongrading is easier grouping. For instance, if in a graded school you had too many children for a class in one grade and too few for the grade above, adoption of nongrading would make it easier to divide the children into classes having equal numbers of children. Nongrading can also lead to improvement of the whole school program, because making the change forces everyone to look harder at the curriculum and at teaching practices to see where they need improvement (Miller, 1967, p.219).

Miller also concludes that nongraded schools have disadvantages.

The biggest draw back to a successful nongraded program is reported to be the difficulty in getting persons concerned to change their way of thinking away from graded concepts. A long period of preparation - perhaps as long as two years - is needed before the introduction of nongrading. Teachers must learn how to adapt the curriculum to the child rather than make the

> child come up to the curriculum and must learn to plan for the fast-moving child as well as to be patient with the slow one. Parents must be informed through meetings and through written materials of just what the nongraded school is. If this is done, the majority of parents will support the idea of nongrading, according to those in systems where it has been tried.
>
> One area of frequent misunderstanding is in reporting pupil progress to parents. When grade standards are abolished and children are no longer compared with each other, parents cannot readily understand what kind of progress their children are making. The remedy for this, according to proponents of nongrading, is personal conferences between parents and teachers in place of or in addition to written report cards. A folder of the child's work and notes as to which books he is currently working with are helpful in explaining the child's progress to his parents (Miller, 1967, p.220).

In a memo, the NEA (1966) summarized the advantages and disadvantages of doing away with grades in the public schools. The advantages stated were that nongrading eliminates the problem of whether to promote or not to promote; can save money, because children do not repeat grades; creates less pressure, so children are happier and teachers less harassed; is more democratic and individual centered; facilitates grouping; and often leads to improvement in other aspects of the teaching program. The disadvantages identified were that it is difficult to get teachers to change their practices; reporting progress to parents causes misunderstandings; difficulties may arise when pupils transfer to graded schools; and there is extra work for the teacher - record keeping, articulating reading with other subjects, and orienting new teachers to the program.

An NEA review (1966) of research into nongraded schools pointed out that the results of most studies appear to be quite favorable. The authors reviewed eight

significant studies and presented a sizeable bibliography of other supportive studies. In a major controlled, three-year experiment, Hillson and others studied the effects of nongraded organizational plans on student achievement. The researchers found that the experimental, ungraded classes scored significantly higher than the control groups in paragraph and word comprehension, and in reading ability. The researchers reported:

> Generally it can be concluded that pupils participating in a nongraded primary organization (all other things being equal) will achieve at a significantly higher level on measures of reading than will pupils participating in a graded situation. Specifically, it may be stated that pupils of all levels of ability achieved at a higher level than pupils in a graded situation. Further, it is concluded that the increased achievement of the participants in the non-graded primary program is primarily related to organizational structure when methods of teaching are held constant (Hillson, 1964, p.550).

Skopski studied (1961) reading achievement in nongraded primary schools and concluded that all children benefitted from the program. The research showed that gifted children did not under-achieve, nor did slow learners become frustrated by failure. Children seemed to progress steadily from level to level at their own rates.

Goodlad (1964) and others have also found that since the pressure is off the children and their teacher for covering a certain amount of prescribed materials each year, nongrading results in happier children and less harassed teachers.

Although research studies on the value and efficacy of grouping by age have produced inconsistent findings, in the majority of these studies (Balow, 1962; Justman, 1968; Passow, 1962; NEA, 1963) a reduction in the range of ages and abilities of students in groupings did not produce increased achievement.

Although it was common in the early one-room schoolhouse for students of a variety of ages to be taught in the same class, the practice faded with the onset of larger graded schools. As a result, many of the instructional strategies used when students of varied ages were routinely grouped together have apparently diminished in current practice. The practices of extensive use of small-group instruction, peer-tutoring strategies, and cross-age grouping have been associated with the implementation of multi-age grouped classes. Many of these instructional practices have also yielded positive results for students.

In studies by Cotton, Berliner and Casanova (1988), the researchers found that cross-age tutoring and peer-tutoring instructional strategies had a significant positive impact on the learning of the students being tutored. In addition, the cross-age tutoring program was found to be a cost effective manner of providing additional help to students in reading, math and science content areas (Berliner and Casanova, 1988).

In a study of cross-age tutoring by Cloward (1967), older secondary school students successfully raised achievement scores for previously low-achieving elementary students through tutoring. In this study, the tutoring program had the greatest positive impact on the tutors themselves.

The development of inter-age or cross-age grouping, sometimes coordinated with "olders teaching youngers" tutoring programs, has been demonstrated to produce positive outcomes. In the early one-room school, older students often helped youngers with school work (Tewksbury, 1967). The practice of cross-age tutoring, according to Villa and Thousand (1988), can be an effective means of meeting individual student needs, allowing each student to progress at his/her own rate and

level of ability, and give the students opportunities to learn from and associate with both older and younger classmates.

Another practice that is frequently associated with multi-age class instruction is the practice of utilizing small groups, groups of two to ten students in learning or cooperative groups, as a primary method of organization for instruction. Garvey (1969) fears that schools may be over emphasizing large-group instruction. He advocates limiting the use of large-group instruction to those situations where information and resources would not be available to students on an individual or small-group basis. He cites appropriate large-group instruction activities as visits from a dignitary, the showing of a rare or expensive film, or the use of a difficult-to-arrange demonstration. There is also a possible advantage to administering tests in a large group, according to Garvey.

Proponents of small-group instruction (Garvey, 1969; Wallace, 1965; Carnahan, 1970; Johnson and Johnson, 1988) stress the value of small groups in permitting free, oral expression, fostering the growth of interpersonal relationships, utilizing individual student skills, enhancing cooperation, and facilitating students in developing and practicing skills. These advocates of small-group instruction maintain that personalized learning activities, made possible through cooperative small-group structure, offer opportunities for the students to pursue their interests, develop powers of observation and deductive reasoning, and increase their ability to utilize higher level thinking skills. The use of small-group instruction is also viewed as a means of meeting the needs of a diverse group of learners, who have different needs and goals (Villa, 1989).

In his report on the organization of nongraded schools, Howard (1966) points

out that a shift from a age-graded structure to a nongraded structure is probably not sufficient to improve student learning unless the change in organization is accompanied by a change in teacher attitude and action. Howard describes the relationship between nongraded organization and instruction:

> Efforts by a faculty to ungrade the school should be a part of an over-all commitment to the ideal of individualized instruction. The faculty should be concerned not only with organizational innovation; they must also be concerned with such related projects as making the curriculum more meaningful, stimulating students to think critically and express themselves clearly, helping students master skills which are essential to semi-independent and, later, independent learning, and fostering an attitude of inquiry on the part of students (p.50).

Although a change in the administrative system of organization, from a single age/graded grouping system to a multi-age/graded grouping system, is probably not enough to produce improved instructional outcomes, the use of the instructional strategies of small-group instruction, peer-helping strategies, and cross-age tutoring that are reported to be frequently employed in mixed-age or non-graded settings (Goodlad, 1983) may be practices that hold promise for improving student learning outcomes. These instructional practices are reported to be effective in any type of organizational structure in schools and are likely not only effective in multi-age group classes. However, the practice of multi-age grouping may be particularly useful in putting the instructional practices of cross-age tutoring, small group instruction and peer tutoring into daily use.

There has been a renewed interest in mixed age grouping, particularly at the elementary school level. Advocates of multi-age grouping believe that this practice should be expanded. The majority of the studies that have been done on the results

of multi-age and ungraded programs seem to favor this type of organization for instruction. This is one of a number of reasons for possible expansion of this practice.

According to the Director of ERIC, Lilian Katz (1989), nongraded and multi-age plans are found most frequently in the early elementary grades. Katz in Education Week argues that multi-age grouping is emerging as a trend in the 1990s for a number of reasons.

> ... The concept is drawing renewed attention today as a way of curbing ability tracking and grade retention, two factors a growing number of educators identify as detrimental precursors to failure for some young children. Multi-graded units steer schools away from competitive and overly academic instruction in the early grades and toward methods grounded in hands-on learning, play and exploration. (Katz, 1989, p.13)

In a review of K-2 and 3-5 grade structures in Pennsylvania, Raze (1985) concluded that the K-2 and 3-5 structure is most often implemented in response to declining enrollment. However, Raze cites unanticipated benefits that often resulted from a reorganization into K-2 and 3-5 units to balance class size and make more efficient use of staff. Educational benefits may include better concentration on the educational and psychological needs in the two age groups. An evaluative report revealed that the new multi-grade structure saved money and resulted in improved discipline, better student attitudes, less retention and improved student interactions.

At the 1990 annual meeting of the National Governors' Association (NGA) in Mobile, Alabama, the NGA Task Force on Education Report recommends that, "States should move away from arbitrary grouping of students by age." The task force report criticized elementary and secondary schools for assigning students based on

where they live and grouping them according to age and narrowly defined ability. The NGA further recommends that, "States should consider other approaches such as upgrading early primary programs and increasing the use of multi-age grouping to enhance individual growth" (NGA, July, 1989).

In a report from the Nebraska Department of Education, the author states that:

> Virtually every policy report is suggesting that multi-age grouping is a more developmentally sound way to deal with individual differences. (Egertson, 1989)

The provincial government in British Columbia, Canada, has mandated a combination of grades K-3 in all classrooms for all primary schools in the province by 1990 (Cohen, 1989). The plan would extend this "continuous progress" model through the upper grades by the year 2000. Many schools in British Columbia now have ungraded K-3 units.

Vito Perrone, Director of Teacher Education at Harvard University, reports in Cohen's article (1989) that although few elementary schools have yet "fully embraced" a primary ungraded class grouping, many have begun to teach more than one grade together and many keep pupils with a teacher for two years instead of one. Cohen, in Education Week (1989) describes plans to implement multi-age programs:

> To move developmental theory into the early grades, some states and districts are currently considering implementation of ungraded units.
>
> The Pittsburgh school system plans to explore the concept of multi-age grouping for K-3 pupils at eight schools next year as part of a restructuring plan.
>
> A California task force on school readiness last year urged a reshaping of classrooms for 4- to 6-year-olds, to offer "integrated, experiential programs,

> "drastically altered" assessment methods, smaller classes, and better training of early childhood teachers. A new elementary school task force named by the state superintendent is expected to draw on the readiness panel's work.
>
> The Florida legislature is expected to reconsider next year a measure that would encourage more "developmentally appropriate structures" in the early grades, including ungraded K-3 programs, and discourage retention in kindergarten and 1st grade. The bill died this year.
>
> Oregon lawmakers are also expected to reintroduce a measure that would encourage districts to enhance primary programs for at-risk pupils, with developmental primary units offered as one option (p.14).

In the same Education Week report, Lynn Stuart, a school administrator from Cambridge (Massachusetts) Public Schools, advocates increased use of multi-age classrooms. According to Ms. Stuart:

> Multi-age classrooms allow us to use the information we now have about how students learn. They offer real potential for a naturalistic, lifelike setting where kids can learn from each other (1989, p.14).

Additional efforts to re-initiate multi-age grouping have come from the National Association for the Education of Young Children (1987) and the National Association of State Boards of Education (1989). Both organizations have position statements that advocate mixed-age grouping for four- through eight-year-olds.

Teacher Attitudes Toward Multi-Age Grouping

Research on the benefits and the history of multi-age grouping have been discussed earlier. Studies and reports cited in the literature that relate specifically to the problem of defining what teachers say about multi-age grouping and what teachers believe about the practice are reviewed in this section. Numerous reports

reviewed related directly or tangentially to the opinions teachers hold about multi-age grouping. Studies of teacher attitudes toward mixed-age groupings in elementary schools and teacher beliefs about multi-age and multi-grade level instruction are included here. Descriptors of age-grade placement, class organization, grouping, multi-age grouping, classroom research, school organization, non-graded grouping, school personnel, teacher distribution, elementary teachers, teacher attitudes, teacher beliefs, and cross-age tutoring were utilized during the literature search.

In a study by Veenman, Simon and others (1987), the authors investigated students and teachers in elementary, mixed-age classes. They concluded that teachers found working in mixed-age classes very difficult, with most working as if they were teaching two different classes which had to receive separate instruction. The Veenman and Simon study was similar to the findings of Pratt (1983), who summarized findings from various fields of study on mixed-age grouping. Pratt cites evidence from the fields of ethnology, education and anthropology that multi-age groupings were more natural and yield benefits socially for participants. One finding of Pratt's review from education literature was that teachers reported difficulty managing multi-age groups due to single-grade curriculum expectations. This study, along with others by Oritz (1989) and Gelb (1982) highlight the difficulty in implementing change from single-age/grade approaches to interdisciplinary teaching and multi-age elementary classes. The authors cited barriers to multi-age groupings, including published curriculum based on single-grade level outcomes, published textbooks and workbooks based on single-grade curriculum achievement standards, a lack of commercially available open-ended materials for individual instruction, the attitude of teachers that certain content areas are to be covered by certain age

students, and the lack of knowledge about appropriate developmental instruction by elementary-grade teachers.

In yet another study by Katz (1989), she identified a problem with teachers accepting individual differences and multi-age grouping because of the perceptions held by many teachers that putting children of the same age group together allows them to be taught all the same thing at the same time on the same day. Katz points to the lack of child development information as a reason for a lack of more varied grouping practices in schools. Katz also cites a lack of awareness of research information on cross-age studies, mixed ability grouping and cooperative learning literature as reasons for a lack of teacher acceptance of multi-age grouping practices.

In a related study, Goodlad and Anderson (1986) reported that split classes, the practice of putting two grade levels together with two separate curriculums, and with a teacher responsible for teaching content to two distinct groups simultaneously, has soured the willingness of teachers to accept multi-age classroom assignments. In a related report on multi-age, primary school grouping by Carol Cummings (1989), she states that split-grade groupings are frequently used to balance class size and decrease costs. Cummings reports that the administrative practice of split-grade grouping to balance class size has created a problem with teacher perceptions of the viability of multi-age instructional methods.

In a study by Perkins (1961), he mentions other disadvantages of nongraded programs. Perkins cites the extra work caused for teachers by ungrading, including more time spent on record keeping, the problem of articulating reading levels with other subjects such as arithmetic and social studies, and the orientation of new teachers.

In a survey of educators, Dean (1964) found that some teachers think that the absence of fixed grade level standards for all children is a serious fault. He also reports that some teachers believe that fitting the curriculum and teaching to the needs of each individual child puts too great a burden on teachers.

There has been some research conducted that concludes that teachers have a negative attitude toward multi-age grouping. Acheson (1984) reported that parents and teachers involved with combination classrooms in Edmonton, Canada, did not approve of multi-grade classes.

In a study by Kenneth Brown (1989), 34 teachers, all of whom had experiences in both multi-grade and single grade classrooms, were asked their views on multi-grade classrooms. When asked their preference for teaching the majority (79.4%) chose the single grade. Only 3% preferred the multi-grade class, while 17.6% had no preference. Almost all respondents in Brown's study stated that increased preparation time was required for multi-graded classes, and there was less time in class for discussing topics compared to a single grade. Only two of the 34 teachers surveyed submitted reasons why multi-grade classes are superior to single grades. When Brown reviewed questions of workload, he found that three-quarters of the teachers reported that significantly more work was required in the mixed-grade classroom. The remaining one-fourth said the workload was the same for both types. Not a single teacher felt that a multi-grade classroom was a lower workload.

In his review of nongraded primary schools, Calhoun Collier reported that "Teachers must work harder in a nongraded school because they need to constantly evaluate pupils and report on their progress" (1966, p.50). Collier goes on to describe how teaching in a nongraded setting is positive for teachers. His

observations and teacher interviews lead him to conclude that "The teachers' personal satisfaction is much greater in the nongraded school" (1966, p.50).

Summary

Multi-age grouping practices were described in the literature related to the development of the first full age-graded American school, the Quincy Grammar School in Boston, Massachusetts, in 1859. The development of the graded school was based on the belief that homogeneous grouping and large group instruction would greatly improve the instructional practices of the day. The current age-graded structure that so dominates public school organization was based on a very simple rationale. In the rationale, the need for a system of schooling that provides the greatest good to the greatest number in the shortest time at the least expense is emphasized. This rationale is still firmly in place today.

Attempts to modify significantly the age/graded organizational structure of public education have been largely unsuccessful. Several attempts, however, have been made to revitalize and extend alternative age and grade grouping practices. The Individually Guided Education (IGE) movement, and other informal school movements during the 1950s, 1960s and 1970s, attempted to modify grade level grouping practices. Despite these attempts the most common practice of school organization in today's American schools is that of the age-graded structure.

The age-graded system has its critics who provide evidence that the grade level system is based on false assumptions about the learning process. These critics present arguments that students cannot have their needs met in a system that demands that all students learn in a lockstep fashion. Others criticize graded systems for rejecting and failing students who do not match up to predetermined grade level

standards.

A review of the literature on multi-age group and ungraded practice reveals that grouping by single age or grade levels yields no advantages for students in the area of subject matter mastery over multi-age grouping. Evidence has been reported that multi-age grouping appears to yield benefits for students in the affective domain without adversely affecting student achievement.

Many of the instructional techniques that are associated with multi-age grouped classes: small group instruction, cross-age tutoring, and individualized education, appear to yield promising student outcomes. However, changes in the administrative system of organization in itself, from a single age/graded grouping system to a multi-age/graded system, are probably insufficient to produce significant changes in the teaching/learning process.

There has been a renewed interest in multi-age grouping, particularly at the elementary school level. Advocates of multi-age grouping believe this practice should be expanded. Recent research seems to favor this type of organization for instruction.

Teachers cite numerous reasons why they have reservations about multi-age grouping practices. Current classroom materials, curriculum guides and published materials are based on single-grade outcome standards. Also, there is a lack of commercially prepared individualized materials available, leaving teachers the frequent responsibility to seek out or create classroom materials for instruction.

Other factors related to a lack of preservice and inservice education for teachers in the field of child development, cooperative grouping and cross-age instruction may be hampering attempts at changing current practice. This,

accompanied by a continuing focus in teacher preparation programs on tools and methods rather than assumptions and beliefs about learning, may be hampering the development of alternative grouping methods.

The past practice of multi-age grouping in split classes, due to economic considerations and administrative convenience rather than instructional outcomes, may also be contributing to a reluctance on the part of teachers to accept multi-grade assignments.

The body of knowledge on how to instruct students of different ages together, without using traditional single-grade curriculum content, needs to be expanded, described and disseminated, according to many of the reports.

Additional information on how teachers think about age and grade groupings is needed to provide a comprehensive view of attitudes teachers have toward multi-age grouping. Adding to the body of knowledge currently available about what teachers, who have experience with multi-age grouping, believe about multi-age classroom groupings may assist educators responsible for preservice and inservice education for teachers to plan experiences that may assist in the examination of varied-age grouping practices. Identifying who the teachers are, and what experiences they have had that make them perceive multi-age grouping as a positive practice, may assist educators in planning like experiences that will enable teachers to grow and explore different grouping arrangements that may yield improved instructional outcomes for students.

CHAPTER III

DESIGN OF THE STUDY

The relationship of multi-age grouping to student instruction has been emphasized in the previous chapter. Evidence presented demonstrated that, despite reports that indicate that multi-age grouping and the accompanying instructional practices may be of significant educational value, these practices are not used to any great degree in today's educational institutions. Some of the factors were reviewed that may be inhibiting the effective use of multi-age grouping practices. It was recognized that efforts are underway to reduce barriers to the use of the instructional methods associated with multi-age grouping. The teacher was identified as a key factor in bringing about a wider and improved use of these methods. The importance of teacher beliefs and attitudes was reviewed in relation to educational change.

This chapter contains two major parts. The first is a brief discussion of ethnographic methods in general, and the second is a description of the specific methodology and the setting for this study.

Ethnography as a Method of Inquiry

Ethnography is not a clearly definable methodological approach to research. It is a variety of approaches of many categories and descriptors. "Field work" or "field method" are terms used to describe the study of events in natural settings.

Schatzman and Strauss (1973) used the term "field method" to describe a system for the observation of participants in real life situations. Erickson (1987) used the term "interpretive research" to describe the same method.

In planning an ethnographic study, the topic and site are determined and the research questions are designed to guide the data gathering process. However, these questions are not rigid in nature. The research questions and, therefore, the system for gathering data may change in response to events in the study site, or may change in response to the researcher's understanding of the events (Erickson, 1987).

Site observations begin with a focus on a description of the site itself. The patterns of activity are observed and recorded, the social structure is studied, and the relationships of participants are explored. Erickson (1987) refers to this process as "progressive problem solving." The decisions about what to see, who to concentrate on, and where to physically locate emerge as more data are collected. The data collection process itself leads the researcher to the areas of inquiry.

As the study progresses and the data are organized, an analysis of the information suggests that certain patterns exist. As these patterns emerge, they begin to provide information that forms the basis for the development of assertions. The assertions are then supported by evidence from field observations, interviews or document analysis.

The field notes and records of the events observed in the research site that pertain to the research questions are detailed and descriptive in nature. Events and conversations are recorded in detail. Impressions and questions for further study are recorded by the observer in the field notes. The observer's interpretations are kept clearly separate from the actual recording of observations and conversations.

The data collected through field work are analyzed to develop the findings of the study. The first step involves categorizing the data. Many of the categories are provided by the research questions. Others emerge from the data collection process. The categorized data are examined for important similarities, patterns or relationships that help explain the situations being investigated.

The results of field study at one research site will not necessarily be the same as those from another site. Generalization in ethnographic field work is a cumulative matter: the more cases there are that support a given explanation or assertion, the more generalizable the findings to other situations.

The Plan of the Study

The organization and operation of current multi-age classrooms are described in this study. Data needed to accomplish this description were obtained by direct observation, document analysis, and formal interview procedures. Forty-eight hours of direct participant observation was conducted in three multi-age classrooms in the Hill Elementary School in Ann Arbor, Michigan. In each of the three primary observation sites, students assigned to these classrooms were of four different age groups and three different identified grade levels.

The three classes observed included two combined kindergarten, first grade and second grade (K, 1, 2,) multi-age sections and one combined first grade, second grade and third grade (1, 2, 3) multi-age section. In two classrooms (K, 1, 2), students ranged from age four to age eight. In the other subject classroom (1, 2, 3), students ranged in age from five to nine.

The entire Hill Elementary School is organized in multi-age sections, in different age/grade combinations. The school enrolls students in the identified grade

levels of kindergarten, first, second, third, fourth, and fifth. The school has been organized on a multi-age structure since its formation in 1985. Documents describing Hill School state that the school is organized so that students of different ages and grade levels are placed together in each classroom.

In addition to the in-classroom observations, staff and student participants from the three subject groups were observed at other school locations during the school day, including the lunchroom, hallways, outdoors during recess, in the music room, in the art room, and in the library. The three classrooms that made up the focus of the observations were selected by mutual agreement and consent of the principal and the teachers.

The observations in the classrooms occurred at various times during the day, including morning instruction, lunch time, afternoon instruction, and dismissal period. The site observations began on January 8, 1990, and continued for a period of eight weeks. The observations resumed again during the 1990-91 school year. Field observation began on October 23, 1990, and continued for another period of six weeks. Observations were conducted for three to four hours per week.

All participants in the school who interacted with students from the three subject classes, including students, teachers, parents, support staff, administrators and volunteers, were viewed as subjects of the study for research purposes.

The direct observations made in the three classrooms and in other school settings were recorded in field notes. In the field note-taking process, the interaction patterns, comments, and activities observed were recorded in detail. The written field notes were analyzed to describe patterns, unusual or discrepant events, and to develop scenarios to support assertions made about the instruction, outcomes, or

interactions in multi-age classrooms.

Students were observed while interacting on teacher-assigned tasks and doing self-selected activities. Specific instances of students cooperating on tasks were recorded in detail, as were instances where students of different ages were observed working together.

The observation periods were accompanied by some informal, casual style interviews. Participants were asked questions during observation periods for the purpose of checking for understanding, to clarify the meaning of events, to check for any bias on the part of the observer, or to obtain information on the participants' perspective.

During the observations, detailed field notes were taken of participant conversations in the classroom and other settings around the school. When seemingly significant dialogue was overheard, conversational speech and students' responses to questions were written down verbatim.

This phase of data collection consisted of observations of approximately 70 students and four teachers. Data taken from the field notes of these observations were used primarily to describe the daily operation, organization, interaction patterns, and instructional techniques used by teachers in multi-age settings. The field notes, containing observation data, were then reviewed, analyzed and categorized by common themes. Discrepant events were also highlighted during field note analysis. Common patterns of observations were developed into assertions. The assertions were described and examples from field notes were developed into scenarios that supported these assertions.

In all cases, parents of the 70 children in the three subject classrooms were

sent a letter explaining the study. Each of the adult participants also received a letter explaining the study, and they gave written consent to allow the note taking data to be used in the study report. The observation/notetaking procedure was reviewed by the Ann Arbor Public Schools Research Review Committee and the University Committee on Research Involving Human Subjects (UCRIHS) at Michigan State University. In addition, all student subjects gave verbal assent for use in the study report of information gathered during informal interviews.

The three subject classrooms for observations were selected based on the willingness of staff volunteers to be involved in the study and to have students in the class participate. During the first four weeks of observation, the classrooms were visited three times per week for one-hour blocks. This initial observation period involved the recording of a variety of classroom routines, events, and student interactions. For the final six weeks, the observations were conducted once per week in three- or four-hour blocks. The procedure for the final six weeks of observation focused on following one student through the daily routine and recording, in field notes, the interactions, conversations, and events that happened to this one student during the day. The process of following one of the youngest children in the class, referred to in field notes as "following Nicki" episodes, enabled whole routines to be recorded and described, getting a detailed account of the experience of a young child in a setting with mixed-age classmates.

The informal interviews were also conducted during the final six weeks. Questions and responses were recorded verbatim in field notes. Informal interviews included comments by six teachers, twelve students, and four parents.

The second method of data collection used in this study, formal interview, was

designed to support the observational data on multi-age classroom operation as well as to gather data about the beliefs and attitudes that experienced teachers hold about the practice of multi-age grouping. The formal interviews were conducted in settings without students. During the last three weeks of the onsite data collection, patterned questions were asked of each of the 13 adults interviewed (see Table 1). Both the questions and responses were tape recorded. The recorded responses were later categorized. Categories were developed for content analysis of staff statements. Five main categories of responses were derived: classroom organization, rationale/ philosophy, student instruction, demographics, and experiences/reflections.

Table 1 Formal Interview Participants

Teacher	Grade Levels
R.Z.	4-5
L.L.	4-5
J.L.	K-1
W.L.	4-5
C.O.	K-1-2
L.B.	3-4
J.G.	K-1-2
O.K.	K-1
C.K.	K-1-2
S.E.	Secretary
P.O.	Principal
J.B.	3-4
S.W.	1-2-3

The subjects of the formal interviews were 13 staff members at Hill School. The interview sample included 11 teachers, the school principal, and the school secretary. Table 2 reports the total years of teaching experience for the interview participants and reports the years of teaching experience of each participant in a multi-age classroom.

Table 2 Years of Teaching Experience

	Total	Multi-Age
J.G.	30	27
J.B.	10	10
S.W.	30	17
L.B.	20	20
J.L.	3	3
O.K.	3	3
P.O.	22	15
R.Z.	5	3
L.L.	5	4
C.O.	1	1
W.L.	5	5
C.K.	6	4
S.E.	(10)	(5)

The formal interviews were patterned, with a set of questions being asked of each interview participant. The 13 interviews were tape recorded sessions of 35 to 60 minutes each.

The staff at Hill School that were the subjects of tape recorded formal interviews were asked the set of questions in Appendix A. This interview information focused on what staff of a multi-age grouped school setting say about the practice. The participants were asked to reflect on their experiences with multi-age teaching practices, the rationale for using these practices, and the impact of multi-age grouping on student outcomes. The patterned formal interview questions were designed to gather responses to the study questions.

The final interview questions were field tested. Three experienced teachers from other school sites were asked to review the questions and comment on the question content, vocabulary and grammar. They were also provided with the statement of the purpose of the study in order to compare the formal interview questions to the questions asked in the description of the study purpose. Questions were modified as a result of the input of the three field test teachers.

A third method of data collection included a review of written journal entries by teachers. Ten teachers from Hill School who participated in interviews volunteered to respond, in writing, to questions provided during the interview process. As part of the interview process, formal interview participants were asked to write down thoughts in reflective journals during a six-week period following their formal interview. The purpose of the journals was explained and each teacher participant was provided information on the desired content of the writings, including sample questions to address (see Appendix B).

Journal writing by teachers was utilized as a tool to help teachers reflect on their beliefs and practices in multi-age classes. Journal writing was utilized to enable teachers to report on their current and past experiences that led them to begin

practicing in multi-age classes. Written excerpts expanded on the formal interview information. In combination with interviews, the journal writing analysis was used to describe the rationale teachers gave for multi-age grouping and was added to the interview data to help illustrate how insiders describe the experience of working with multi-age classrooms.

Journal writings also generated data on the social, historical, and educational conditions that influenced the staff to become involved with and/or continue to teach in multi-age group settings.

Study Location and Description

The study was conducted in the Ann Arbor Public Schools (AAPS) in Washtenaw County, Michigan. The AAPS have an enrollment of approximately 14,200 students. The study site selected for the collection of data was the Hill Elementary School. This site was selected because Hill School is purposely organized in multi-age classroom sections. The rationale for multi-age organization at Hill School is based upon educational considerations. The school mission statement at Hill School states that multi-age "family grouping" is practiced because it helps students progress to their potential both academically and socially. Each elementary classroom in the school has at least two distinct grade levels represented. This elementary school enrolls students in grade levels from kindergarten to fifth grade. Hill School classrooms with identified grade levels of three or more were those selected for direct participant observations.

The City School District

The Hill Elementary School, the site selected for the study, is in an urban community. Computer-related, high technology business and a major university

dominate the employment situation. The schools of the public system are officially listed as racially integrated. Hill Elementary School is located on the westside of town.

The Hill school is situated in an old city neighborhood. The homes were built in the beginning of the 20th century. Many of the homes are single-family dwellings.

The School

Hill Elementary School was built in the 1920s. Originally a neighborhood school, the Hill school was transformed, in 1985, into an alternative "choice" school, serving students in a multi-age grouped class setting. The change-over from a neighborhood school to an alternative school occurred in conjunction with a plan to racially desegregate the city's 15 elementary school, four middle schools, and two high schools.

The building itself consists of a three-story main building, with a one-story wing addition. There are 13 classrooms in the building as well as support staff spaces, a gymnasium, multi-purpose rooms, and an administrative office complex. Two large playground areas are adjacent to the school.

There are just over 300 students in Hill school, including students with special needs, from kindergarten through fifth grade. In addition, a privately-operated day care program is located in the building to serve families of kindergarten students, who attend classrooms for a half-day. The day care program also provides before- and after-school care for students in the school.

The instructional staff consists of 14 general education classroom teachers, three teacher aides, two special education teachers, other itinerant personnel, and one principal. The support staff consists of a librarian, two custodians, and a school

secretary. Itinerant personnel assigned to the school for scheduled visits are an art teacher, a music teacher, a physical education teacher, a speech teacher, a school nurse, an instrumental music teacher, and a school social worker.

The school day is scheduled to begin at 8:30 for staff; 8:55 for students. The lunch period is on a staggered schedule, from 11:20 to 1:10. The school day is scheduled to conclude at 3:00 for students and 3:30 for staff.

Summary of the Data Collection Process

In addition to direct student observation within the classrooms, and "following Nicki" episodes, data for the study were collected from other sources over an 11-month period. Data gathering was undertaken using the following methods: direct observations at various locations on the school site, a literature review of multi-age class instructional methods, formal and informal interviews with teachers at Hill School, the school principal., and the school secretary. Informal interviews with parents, students and volunteers were also conducted. Journal entries and written responses to questions by six teachers of multi-age classes at Hill School were also used as a data source.

The staff in Hill School were the subjects of formal interviews to obtain information about what teachers of multi-age classes say about multi-age classroom grouping. Teachers at Hill School, the principal, parents, students and volunteers were asked, via informal interviews, to reflect on multi-age teaching practices, the rationale for using multi-age grouping, and their experiences in a multi-age class setting. Fourteen professional staff members at Hill School were asked to participate in formal interviews and journal writing. Twelve professional staff members gave written consent and participated in formal interviews. Ten teachers agreed to

participate in the journal writing activity; six journals were actually completed.

The patterned interview questions were field tested and modified, based on the feedback. After field testing was completed, formal interviews were conducted. The formal interviews were patterned, with all subjects being asked the same initial questions. Follow-up questions were asked. These varied with each respondent. Information from formal interviews was tape recorded and classified according to responses.

The other method of data gathering, direct observation in multi-age classrooms, included 48 hours of observation with field note taking used as a method of data collection. These data, in combination with the established body of literature on multi-age teaching methods, was used to describe the daily workings of a multi-age classroom and was used to illustrate how multi-age classrooms are organized for student instruction. The classrooms at Hill School, which were the subject of the observation, were selected by mutual agreement of the principal and volunteer teachers. Observations of these classroom students and staff were made in the classroom itself, on the playground, in the lunch room, in the library, and during other school activities.

Information obtained through the literature review and classroom observation served as the basis for formulating the patterned interview questions.

Journal writing by teachers was used as a tool to help teachers reflect on their beliefs and experiences in multi-age classes. Journal writing was used to enable teachers to report on their current and past experiences, including information about their life history. Journals were analyzed for patterns and were used to supplement interview findings. Interviews and journal writing analysis were utilized to gain insight

into the rationale for multi-grading.

Consent Process

Official written consent for their participation in this study was obtained from the principal and teachers at Hill School. Official permission for the study was obtained from the Ann Arbor Public Schools' research committee. Parents of students in the classes that were selected as primary student observation sites were notified of the research project and had an opportunity to indicate that they did not want their child to participate in the study. Parents were notified in writing that they had the right to give or withhold consent for their child to be involved in the study. Adults were also given the right to give or withhold consent to be involved in the study. Students were asked to give verbal assent before being informally interviewed. The UCRIHS review by the MSU committee on human subjects was held, and approval for the research project was granted prior to data collection being undertaken.

CHAPTER IV

DATA ANALYSIS AND RESULTS

In this chapter the information obtained during the data collection phase of the study is reported and analyzed. The data in this chapter are organized in sections that are presented under the topic headings: Classroom Organization for Instruction; Small Group Instruction; Other Instructional Practices; Participant Attitudes, Perceptions and Beliefs; Issues of Concern to Participants; and Summary.

The first section of this chapter contains a description of the classrooms that were the primary observation sites. This section is included to provide the reader with a sense of the organization of the multi-age classrooms at Hill School and to provide the reader with a picture of the classroom routine from a student perspective. Information in this section helps set the stage for the reporting and analysis of data in the other five sections to follow.

Classroom Organization for Instruction

An analysis of the data collected through observation, interviews, and document analysis revealed certain patterns that were evident in multi-age classrooms. One of the patterns that emerged from the data collected related to the ways that multi-age classrooms are organized for instruction. The predominant use of small group instruction was evident in all of the classrooms observed.

Where many elementary classrooms in American are organized primarily to present whole group, lecture format instruction, multi-age classroom teachers in Hill School placed a high value on small group work and on the use of "centers" or stations for the presentation of learning opportunities. Students in all three subject classrooms spent the majority of their day involved in small group interactions. The class schedules were designed to facilitate instruction in groups of two to eight students. The physical arrangement of the classrooms provided work spaces for individual and/or small group work. The following section contains descriptions of the ways that the subject classrooms were organized and how the instructional process operated.

Three classrooms served as the primary sites for participant observations during the data collection period. These classrooms are referred to by teacher initials: Ms. S.W., Mr. C.O., and Ms. C.K.

S.W.'s Classroom

S.W.'s classroom was located in the south wing of the Hill Elementary building. There were twenty-four students in the class and they were in grades first, second and third. The classroom was organized so that student work areas were divided by book shelves, room dividers and storage areas. Each student had a "tub" (a plastic dishwashing pan) with his/her name on it. Tubs were on the storage shelves around the room. Each tub contained books or papers belonging to the student. No student desks were assigned. Each student also had a mail slot, a place near the door that contained "important papers," according to Nicki, a first grade student. The mail slots were each marked with a student name on a piece of colored tape. During informal questioning of S.W., the teacher, she told me, "The colored tape represents

the grade level of the student; that's how you can tell what grade they are in." When asked whether grade names, i.e., first, second or third, were used often in the classroom, S.W. said that they were not. According to the colored tape, the class make-up was equally divided among first, second and third graders. The set periods in the classroom were generally thirty minutes long, with changes in small group activity signalled by a bell (a kitchen timer). A schedule was written on the blackboard each day. The classroom was divided into seven distinct student work areas, each accommodating four to eight children. One area, the "rug," was the whole-class gathering place and was the only area where the entire class of students was observed to be together.

S.W. began her teaching in London, England, when open education first began as a movement. Her teaching experience spanned thirty years. She began teaching in the Ann Arbor Schools twelve years ago. Prior to coming to Hill School, S.W.'s experience in England was with both primary and secondary schools that were organized as single-graded and ungraded programs.

The sense of S.W.'s class for the first time observer was one of confusion and a lack of order: students wandering in and out of the classroom, a high level of noise, and twenty-four bodies moving around the room that was disorganized in appearance.

There were tables, study corners, boxes, shelves, pets, piles of toys, piles of paper and various boxes of materials piled together, stuff seemingly everywhere, students were all different sizes and shapes. There was a variety of ethnic and racial groups represented and a great variety in the maturity level of the students. One girl sat in a bean bag chair, sucking her thumb, while another boy was illustrating a

lengthy book that he was assembling for a science project.

My first visit left me feeling confused. Students were talking, playing with action figures, looking at books, huddled around a computer, talking with each other and working from textbooks. For the first five minutes that I visited the class, there was no teacher in the classroom. I sat and watched for five more minutes. Students changed seating arrangements, picked up different materials; still no teacher. I wondered if there were a problem; I wondered where the teacher was; I wondered what the organization of the classroom really was, I wondered if this was typical activity for this room.

The teacher did arrive a few minutes later, but the students hardly seemed to notice. They went about their business with a high degree of independence and self-direction. An examination of the records for S.W.'s class revealed that the students were between the ages of six and ten.

During the second observation, I noted that activities changed every thirty minutes or so, and that students were assigned to small groups. The groups were designated on a list that was posted on a bulletin board. Each student was assigned to one of four groups that were named "special," " written work," "reading" and "choice." Each student participated in each of the four activities during the day. When a small group of six to eight students was assigned to the "special" activity, they went to a table where the teacher had set up an activity for the day. One day, the special activity consisted of making a "sculpture" out of tongue depressors and toothpicks; geoboards with rubber bands were set up another day; gluing macaroni was another project, as was creating with pipe cleaners. The "special" area was a hands-on, activity-based center that had as a focus the creative manipulation of

objects. This activity center was also frequently attended by students during "choice" group.

"Choice" was the small group session that students expressed the greatest liking for. During this time period, if students were assigned to the "choice" group, they could engage in any activity within the classroom "as long as the rights of others to learn in a safe and orderly environment were being respected," according to S.W. Students in "choice" frequently joined the "special" activity, gathered in the kitchen area with Ninja Turtles or other action figures to play with or gathered at the computer station. When asked what "choice" was, a student responded that it was "a time to do what we like."

The small group period assigned for "written work" generally consisted of story writing or written math assignments. Story writing used a student-generated experience story approach. Math assignments frequently included math dittos, workbook assignments or application lessons. During "written work," students would frequently get direct instruction from the teacher on the topic for the day. "Written work" was the most teacher-assigned small group session. S.W. would describe the work for the day for each student to accomplish. Students in "written work" sat at a table area. S.W. frequently sat near the group to monitor their progress on daily assignments, and answer questions. During "written work," most students began the period by writing in self-illustrated "journals." During this time, S.W. would circulate and give directions about the daily work to be completed.

Reading period was a small group assigned time when S.W. would call on students for direct instruction in reading, either individually or in small groups. The reading period consisted of students reading trade books selected from the book

shelves in the classroom or books selected from the library. In addition to a designated small group time for reading, there was also a designated reading period for all students, where S.W.'s class would team up with the class of fourth and fifth grades next door in a "reading buddies" format. In reading buddies, students would be scheduled to read together with an older student paired with a younger student, two or three times per week. Small group reading was a daily activity that can be described as a combination of silent reading, seat work and teacher-directed reading groups.

The classroom organizational routine involved blocks of small-group-designated activity time. Students were assigned to designated groups as evidenced by the names of between six to eight students being written on a laminated card. One bulletin board near the "rug" area had cards, with five to seven student names, inserted in "pockets" on the board. The illustration below shows the bulletin board in diagram form.

Randy	Louis	Maria	Beth
Judy	Johnny	Bill	Hal
Tom	Mark	Pat	Rachel
Mary	Daisy	Jeff	Jim
Nicki	Rusty	Tim	Kelly
Paul	Polly		Mike
	Dan		
Special	Written work	Choice	Reading

The cards were moved as classroom periods were switched, when the timer signalled a change. These assigned-work groups were changed "every six to eight weeks," according to S.W.

The classroom contained a bathroom, a teacher's desk, a play kitchen area, a computer area, the "special" table, the "rug" area and four other student worktable

areas.

C.O.'s Classroom

C.O.'s classroom was located on the ground floor of the Hill Elementary School. There were 24 students assigned to C.O.'s class in grades kindergarten, first and second. The students in the class were ages five, six, seven and eight. The classroom had tables and chairs scattered across the room, a large climber was located in the middle of the room, a couch and rocking chair were located in the corner of the room. No student desks were assigned and during the first visit, it was not apparent where students kept their personal items and school assignments.

The enrolled students included "Six kindergartners, ten first graders, and eight second graders," according to C.O., who commented that he used graded labels for "expediency," but preferred to use age descriptors and expressed a desire to get rid of graded descriptors.

On the blackboard was a scribbled schedule for the day. On the first observation visit the schedule read:

8:20 Choice

8:45 Meeting

9:00 Science small group

9:30 Math

10:00 Gym

10:30 Recess

11:00 Reading

11:15 Clean-up

12:00 Lunch

12:40 Art

2:00 Choice

The initial observation began at 9:30 in the morning, with students moving from place to place, in and out of the room. Jessica was drawing, Amy was climbing on the shelf looking for paper, David was reading a trade book from another shelf, Adam was playing with Legos on the floor. The noise level was high, and the activity level fast and furious. Among all this activity, C.O. sat in his rocking chair talking about a videotape project with three girls. Occasionally, C.O. would call out a name and a request or command: "David bring me the calendar." "Justin, turn off the water." After the first 30 minutes of observation, a group of older students entered the room and asked C.O. if they could use the computer. After another 30 minutes, another teacher came to the door, calling to C.O. Several students rushed toward the door, with C.O. shouting orders to put the room "back in shape" and to clean up. The activity level picked up around the room, with chairs being pushed, paper being stuffed into waste baskets and boxes, furniture being moved, books re-shelved, and a rabbit caught and caged. There were several minutes of this activity before students began filing out of the classroom, individually or in small groups, to what I found out was gym class. Two girls stayed in the class to clean out the rabbit cage and put in new woodchips, a task that proved very messy. They did, with some assistance from C.O., manage to sweep up the waste and dispose of it in a plastic bag. The other 22 students did not reappear at 11:00 as they should have according to the schedule on the board. C.O. also left the room without a word. I realized that the schedule was not necessarily a reliable indicator of student whereabouts.

C.O.'s room was divided into five general areas for student activity. One area

referred to as "meeting" was the site for the whole group meetings and discussions. There were benches and a couch in the "meeting" area, along with the "teacher's chair," a rocking chair where C.O. was observed to spend the majority of his time while in the classroom. The other areas of the room included a large motor play area, with a climbing gym, a kitchen/playhouse area, two worktable areas, and a computer station. There was a single bathroom in the room, used by boys and girls, and a sink area.

C.O. began his teaching at Hill school after a career in the construction trades. He had graduated with a teaching degree some ten years earlier, but never practiced in the profession until he began substituting at Hill two years ago. He gained full-time employment one year ago. He became interested in Hill school after being involved with a school camping experience at Hill as a volunteer. He joined the faculty as a result of becoming reinvested in teaching because of his experiences. According to C.O.:

> I wanted to work at Hill because it was everything my education was not. My personal education in the elementary grades was very stagnant, seat-oriented, and I found it extremely frustrating; so this program respected the students and treated students like they were intelligent.

C.O. describes his educational experience in elementary school:

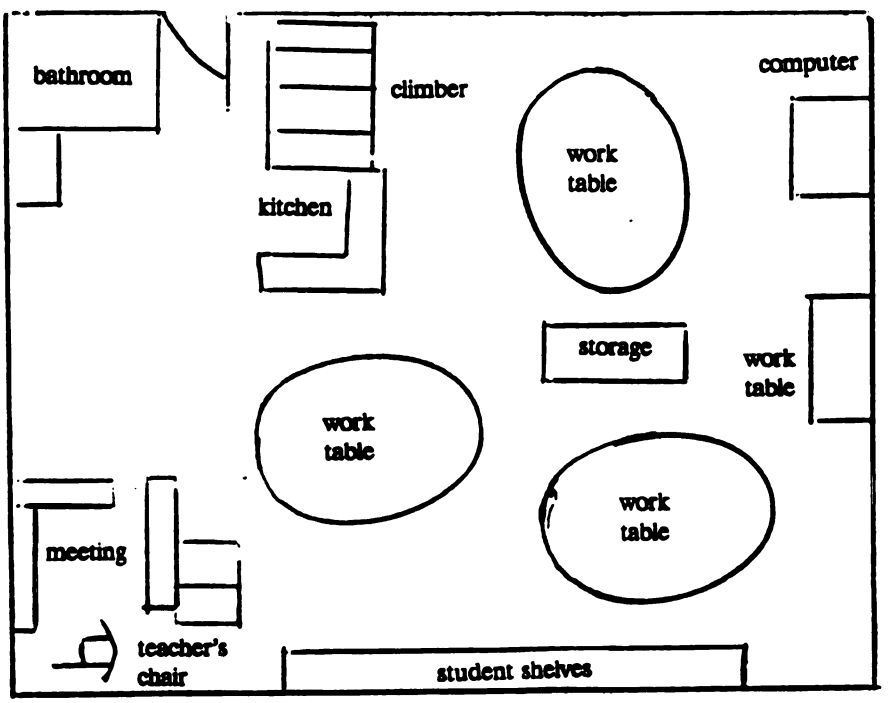
> Most of my standout events were negative, being in the middle reading group or the last reading group and a lot of other degrading things.

Each morning C.O. scheduled a 15-minute class meeting. This was a whole group time for show-and-tell, attendance, and a schedule review. He explained that the rest of the day is flexible in terms of the schedule and that students have the

power to determine their own learning activities:

> I provide them with a lot of different opportunities. We have open choice, when it gets a little crazier and a little louder because they can play in the house [area], build a fort or whatever. We have a quiet choice where they can choose reading, writing, math, drawing or painting. Then, we have contract choice where they sit down and sign a contract with me that they are going to do this for a set period of time...if they want to study fish, they can do a contract choice.

Figure 1 C.O.'s Classroom



C.K.'s Classroom

C.K.'s classroom was located in the south wing of the school and had grades kindergarten, first and second represented. The students in C.K.'s class varied in age from four to eight. C.K. had 23 students enrolled in her class during the morning session and 18 students during the afternoon session, because the five kindergarten

students attended a half day in the morning only.

The classroom was arranged so that tables were set up in five parts of the room with teacher-designed activities set up on each of the five tables. These activity tables or "centers" included perceptual motor activities (puzzles and games), fine motor activities (cutting and drawing), a writing station where students dictated stories to the teacher and illustrated their stories, a "play" area with a pretend kitchen and housewares and a quiet area with bean-bag chairs and books. There was also a "circle" area where whole-group meetings, calendar, and story time would take place with the class. Each student was assigned a "cubby" where their personal material and schoolwork were stored.

The set periods, described by C.K. as "center time," were 20-30 minutes in length. Center time activities alternate with whole group activities that C.K. reported were "five to ten minutes" in length. The art center had colored paper, markers, scissors, glue and precut paper shapes. The listening center had books on cassette tape and a six-person headphone set. The small motor area had scissors, string, paper punches, and styrofoam for cutting and punching holes. The writing center had books, pencils, crayons, and paper arranged on shelving.

The teacher's chair in the circle also served as the location for oral reading, class discussion, and whole group teaching. Grouping at the centers was arranged by choice. Sometimes C.K. would pull together special work groups for instruction. C.K. explained:

> Students sign up for the order that they wish to do things. I put choice in the middle of the center times for everyone all at once because when I got kindergartners I had to be careful that they had a time of their own.

C.K. set up a schedule so that each student went to each center during the day. She stated that students experience things "in their own ways," but that the teacher needs to encourage students to experience many different things.

> In my classroom...you put things out and students look at it, experience it, and explore it in their own ways rather than the teacher finding a prescribed way for them to learn. The thing I have tried hardest to develop is to find ways for them [students] to express and demonstrate their own ways of learning. I'm not the center of the classroom.

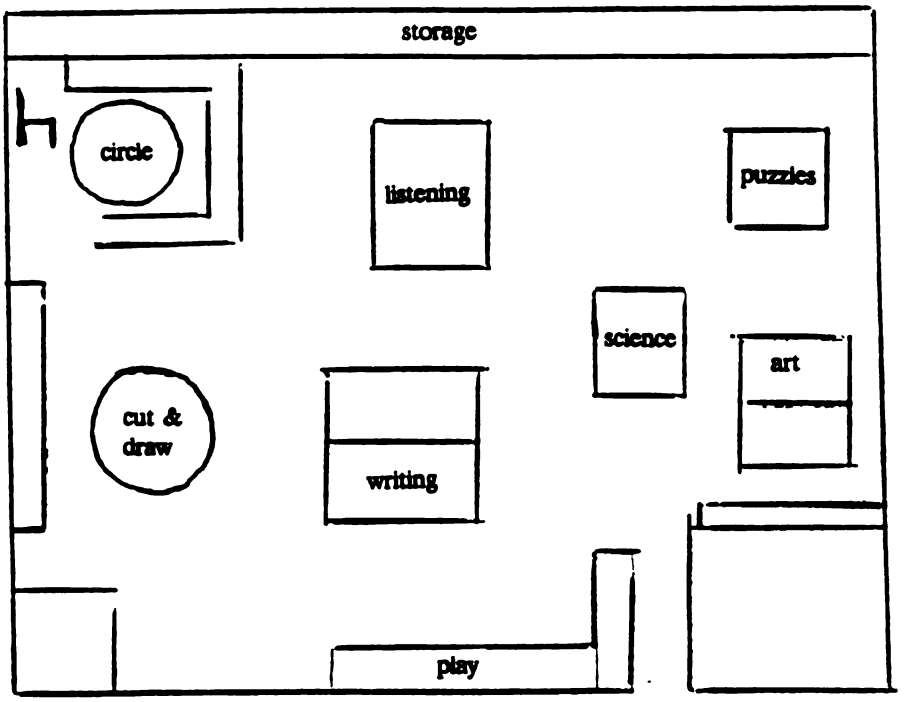
C.K. began her teaching in an inner city school. In her journal writing, she reflected on how her experience encouraged her to teach in a multi-age setting.

> In the inner city, I saw all of the problems involved in trying to meet individual needs and not being successful. Teaching individually means making schools a good place for kids...by learning to think about education as an individual experiencing things in their own way.

Although C.K. has only taught for two years at Hill school, she had additional teaching experience in a multi-age preschool setting.

> I've learned a lot from my co-op nursery, preschool background. I have a strong emphasis on child development in the program design. The child development research is consistent with looking at children as they are, rather than in what grade they are in.

Figure 2 C.K.'s Classroom



A Typical Morning While Following Nicki

One of the primary sources of data gathered for the study was obtained by following one of the youngest students at Hill School through her daily routines over a period of six weeks. These "following Nicki episodes" provided an opportunity for entire classroom routines to be recorded.

Nicki, a six-year-old student in S.W.'s class, was described by her teacher as "the youngest child in the room." I first began following Nicki to observe what, if any, help Nicki received from older students in the classroom. I discovered that following a single student throughout the school day provided an opportunity to experience the flow of events throughout the school day. Events from a typical morning at Hill School are recorded here to give the reader a sense of the setting and how a classroom operates from a student's perspective.

The starting time for Hill school was set at 8:55. At 8:30, arriving early, Nicki was already inside the classroom, along with a number of other children. The children in S.W.'s room were reading, drawing, playing with action figures, and tending to classroom pets. It is hard to say when school actually began because there was no organized activity or teacher direction once the designated start time of 8:55 arrived. Around the room, some children were huddled in small groups, but Nicki was on her own, moving about the room and talking to other children. To the visitor, students appeared to move about freely and talk to each other. Nicki wandered into the hallway. The hall was filled with busy children, displays of paintings, graphs, tables, chairs, and a box filled with plants.

Nicki walked by other classrooms. The classrooms were fairly noisy, and one teacher asked for quiet. In the classroom next to Nicki's, an accident happened: paint spilled and there was recrimination by the teacher. The two children involved in the accident, with black paint on their clothes and in their hair, were sent by the teacher to the restroom down the hall to clean themselves up.

As Nicki returned to her room, there had been an increase in the amount and variety of the activities. S.W. was in the room now, sitting at a table with a small group of four students. Another group of children was sitting on the floor in the "kitchen" area stacking blocks into tall towers. Nicki joined two of the boys without hesitation and began stacking blocks. Upon finishing the tall tower, one boy counted with anticipation, "Fifteen, sixteen," as he added the last one. "Don't touch it," he commanded, as Nicki stepped back.

At the other end of the room, two small boys were sitting in a bean bag chair looking at a book. A solitary girl was sitting at the computer nearby. Nicki moved

to a table covered with yarn, string, and paper. When asked if she had a desk or a seat assigned to her, Nicki shook her head "no." Nicki sat down and began stringing dry pasta on yarn. She was joined by two other girls. On the storage shelf next to Nicki, in plastic boxes, there were beads, buttons, and odd combinations of things, in addition to commercial instructional materials like cuisenaire rods, an abacus, unifix cubes, and number lines.

The class had a library corner separated by a room divider that also served as a book shelf. Nicki sat in the library corner twice during the first hour of observation, hanging around, handling the books, looking at pictures, and listening to the other students read. Nicki appeared to be studying people as they read. She would then mimic the actions of the olders she observed while sitting nearby. None of the other students appeared to notice her parroting. No textbooks were noted to be present in the classroom. There were a few workbooks. The classroom contained mostly trade books in large numbers.

As Nicki picked up a book, she was called to the "rug" area by S.W. The students slowly assembled for the first whole class session of the day. It was 9:30.

S.W. settled down the group of 23 that sat on benches, on the floor, on tables, and on the rug. Nicki sat on the rug with her eyes closed, leaning against Rita, a second grader. S. W. reviewed the schedule for the day. John, an older boy, called the attendance roll and marked the names on a chart on the blackboard. Nicki did not answer when her name was called, but John marked it anyway as Rita jabbed her shoulder.

The class had music today. S.W. dismissed the class from the rug area and Nicki burst out of the door with three other young girls and ran down the hallway,

down the stairs and through an open door. A tape player in the front of the music room was already on when they entered, playing rhythmic beats, and the teacher passed out a book to each child as they entered and went to the desks set up in a circular arrangement around the room.

As the tape ended, J.W., the music teacher, paused at the door and took two little girls by the hand as they entered. A boy picked out a tune on a xylophone and suddenly the class broke into song. Nicki sang along to the greeting song that had been taught as a signal that the class was about to start. Students took turns picking one another to come to the front and use a drum to direct the whole group in a lesson on singing from a short music score. Nicki raised her hand but was not chosen by the others during this 15-minute portion of the lesson. Next came singing from the songbook as a class: the spiritual, "All Day, All Night," and three other songs. The class was dismissed at 10:30 with no teacher to meet Nicki and the others. Nicki did not hurry out this time; she helped Sally collect the books from the desks and put them on the shelves. Nicki and Sally lingered in the music room and talked to each other while they sat next to the bookshelf. After a few minutes, they freely got up and moved down the hallway.

Back in the classroom, the children read aloud to each other. There was a different group of children present, fourth and fifth graders from J.B.'s class next door. Nicki rushed in and joined an older girl who was seated in the kitchen area. Nearby, a child asked another how to spell "angel." Two boys stood at the window looking through a pair of binoculars. Five children were seated by the teacher with colored Unifix cubes on the table. There were 30 children in the room at this time. While many different projects were underway in the room, the teacher said she

makes the best of it. According to S.W., "Noise is a matter of concern only when there is too much of it for people to communicate or when it disturbs children working alone." S. W. described this time of day as "reading buddies" and explained that students are accustomed to noise at this time.

At about 11:00, Nicki and her reading buddy, Allison, put down the book about a cricket that Allison had been reading to Nicki and moved over to the hamster cage by the "special" table. The two girls talked about the pet hamster that belonged to the class. Allison opened the cage and ran her fingers on the fur. Nicki watched another group using a funnel to pour rice from large containers to smaller ones. She left Allison and joined in. Nicki spent the rest of the morning with her hands and arms deep in the rice bin. She was totally absorbed in the activity and appeared surprised when the teacher's voice rose above the others in the room. "Time to clean up. When you have put things away, come and sit in the rug area."

All was accomplished within minutes, with few directions from the teacher. As the class assembled, S.W. read a poem about a princess and a dragon. When the poem was over, the class grabbed sacks and lunch boxes and headed for the door. Nicki was one of the last to leave. She put on her coat and followed the class to the lunch room.

Small Group Instruction

This, the second section of the chapter, includes a description and analysis of the use of student small group organization for instruction. The data presented suggest that multi-age classrooms are primarily organized by small student work groups to facilitate instruction and enable teachers to manage the classrooms. These classrooms had a wide range of student ages, abilities, and interests represented.

Throughout the day, students in the subject classes spent most of their time with other students in small work groups. This pattern was evident in each of the multi-age classes observed.

The observations and interviews conducted in multi-age classrooms provided evidence that these classrooms were organized to facilitate work in small groups. The classroom arrangements, with many small areas for specific instruction, were set up specifically to allow groups of two to eight students to work together. Students were placed by teachers in small groups or self-selected their group partners. In some cases the students moved together as a group throughout the designated instructional periods. In other situations, the students moved from activity to activity without teacher direction and without groups being designed by the teacher. In the latter cases, teachers reported "student choice" as the small group format and method of organization. In all three subject classrooms observed, the daily schedule was designed by the teacher to devote the majority of the allocated class time to the designated small group periods.

The multi-age classrooms were organized so that students work in small groups. The day was scheduled so that the majority of class time is spent in small group work. The students form and reform small groups according to the daily schedule.

Mike and Jeff, two older students in S.W.'s class, were reading aloud to two younger students. Hiawatha was the topic of the reading and conversation, as the four students leaned back in beanbag chairs in a corner of the classroom behind a wall of bookshelves. In another part of the classroom, five students of different ages were in a play kitchen area; some were pouring empty boxes of cereal and others

were sweeping with brooms or rattling pots and pans. Three other small groups of two to eight students were scattered about the room. S.W., the teacher, was not in the classroom. This scene was part of a pattern that was repeated throughout the day: small groups of students talking together, sitting together, and lots of movement around the classroom, often without teacher involvement.

The daily schedule was written on the corner of the blackboard.

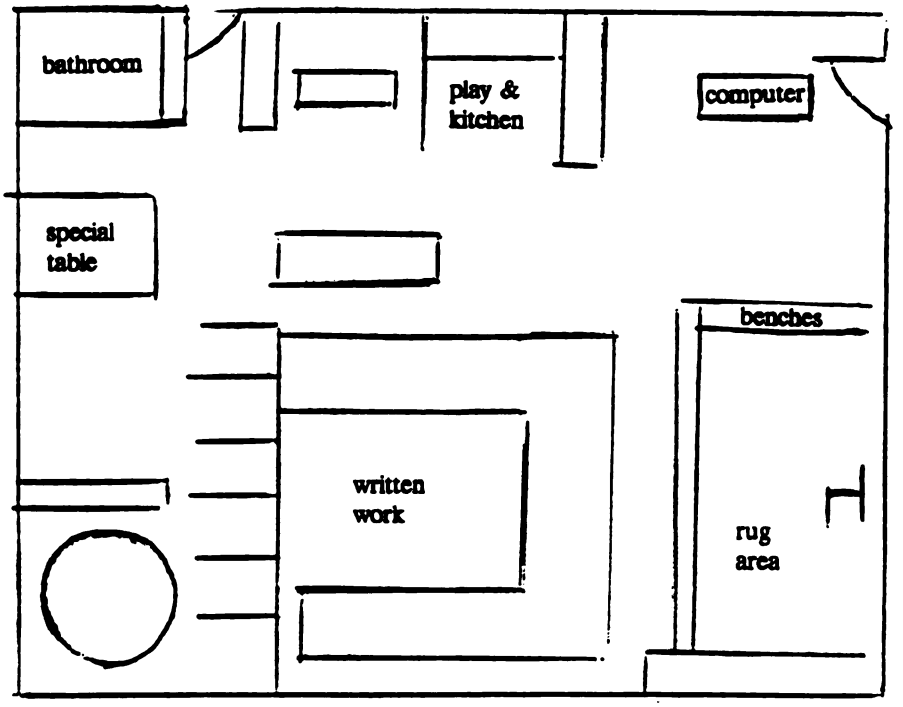
9:00	groups
10:15	recess
10:45	music
11:30	lunch
12:15	groups
1:15	reading buddies
1:45	groups

Although the schedule differed each day, to some extent, the inclusion of groups as the primary activity or method of instruction used in the classroom was consistent. The absence of designated whole-class time periods was also a consistent pattern. Mary, a first grader, explained, "We have groups and can go to choice, reading, written work or special." In S.W.'s classroom, students had assigned group members that they traveled with throughout the day to the four designated group activities, but students frequently strayed from these groups to observe others, to talk with the teacher or to leave the room. On the bulletin board near the teacher's chair were four pockets of laminated construction paper. In each pocket was a card with the names of five, six, seven or eight students on each card. A kitchen timer bell rang, and Mary, a younger student, walked over to the bulletin board and announced,

"It's time to switch." Nothing happened immediately, but within two minutes, students began to put away materials and relocate to different areas of the classroom. Five minutes after Mary had moved the name cards one pocket to the right, S.W. announced, "O.K., class, it's time to settle down. I need to see Paul and Hal over here, please." Some students took papers out of wash tubs and sat in chairs; others did not move at all. A group of five girls was joined by two more and began gluing tongue depressors and toothpicks on paper plates. They were joined by two older boys who announced that they were in "choice." Choice was a time in S.W.'s class when students could select their own learning activities within the classroom. It took five more minutes for most of the students to sit down in a chair or on the floor.

When seated in small groups in S.W.'s class, the students were separated from each other by a number of physical barriers. The classroom had three desks in it, five study carrels, seven tables, four dividers, five storage units and six bookshelves. Seven distinct areas of the room were divided off. Only one area was large enough for the entire twenty-four students to gather together. This large group area was called the "rug" area and consisted of benches arranged in a rectangle around a chair, facing a blackboard and bulletin board. When all the students were around the "rug" area, there was insufficient room on the benches, so many sat on tables or bookshelves when a "class meeting" was held. The classroom arrangement was very different than the neat rows of desks seen in many elementary classrooms. The room arrangement, with small tables grouped in a cubicle behind dividers, lent itself to small group or independent work arrangements. A sketch of the classroom's physical arrangement further illustrates how the room was set up to enhance small group interaction.

Figure 3 S.W.'s Classroom



During questioning with S.W., she related,

> Frequently using small groups is challenging. The problem with so many options is keeping students engaged. When it runs well, students are actively pursuing information they need; when it's not, there is a chaotic feeling. Having small groups as the basis for instruction can be scattering, but during those moments it works well, it results in lasting results. I'm always working on this. The challenge is to have a lot of centers, with really meaningful activities set up for kids.

Small group instruction was the basic mode of teaching in the multi-age classroom settings observed. Teacher-directed mini-lessons, as well as student choice and independent work, made up the majority of student learning experiences. Teachers planned and arranged classrooms to facilitate student tutoring experiences and small group cooperative learning.

* * *

C.K., a teacher of a K-1-2 section, organized her classroom in a learning-center approach. She planned activities in five or six learning centers as part of each day's schedule.

C.K.'s classroom was off the first floor corridor, up a half dozen stairs. At 10:00 a.m., four young girls were seated on the floor in the hall with a pile of magazines, canisters of paste and a very large sheet of paper. They were cutting and pasting as they talked about magic stars and pumpkins.

"I need to cut out a pumpkin," said Katrina, a kindergarten student.

"Do you need help?" said a voice from inside the classroom.

"I'll help you," answered Carol, another kindergartner in the group. Carol cut out the pumpkin and handed it to Katrina.

Nearby an older boy was reading a story to a younger child; they were both giggling about "Old Bear" as they turned the pages together. Two girls and one boy were silently looking at other books. A look inside the room had C.K. sitting at the writing center with six other students. Several students at C.K.'s table were writing in notebooks or on loose leaf paper. A table on wheels went by with wood blocks on top. The children at C.K.'s writing center did not look up as the table rolled by.

C.K. got up and walked out into the hallway. A child turned toward her. "What's this word?" she asked.

"It's mountain," replied C.K. "Are you ready to hang up your display?"

The walls of the hallway were covered with a variety of art work and posters. It was just before Halloween and a wall of jack-o-lanterns made from paper bags lined on one side of the hall.

The poster, made from the student magazine cutouts, had masks, pumpkins,

costumes, food pictures, and other drawings on it. C.K. helped the students tape the poster at a convenient height for small children to see.

C.K.'s K-1-2 classroom size was a little smaller than some of the others in the building. The class enrolled 23 students in the morning and 18 students in the afternoon. The five kindergarten students, referred to by C.K. as "morning students," attended for a half day only. C.K. referred to her first and second graders as "full day" students, thus avoiding grade labels. What was most striking about C.K.'s class was that there were no desks for students or the teacher. Instead the room was arranged by work table areas that C.K. referred to as "centers."

In the listening center, four students were lying all over the table with headphones on, listening to a cassette tape. On another table was a science center with equipment on it: magnets, mirrors, and a magnifying glass. Alongside were other objects: seashells, bones, hair, a feather, some rice and wood. On a nearby shelf were plants, a fish tank and books.

At the art center were easels, paints and brushes, waiting to be used. Newspapers were spread out nearby on the floor and old stained "paint shirts" hung on hooks in a nearby corner.

The teacher sat down at a small round table for a few minutes with two boys who were writing and illustrating stories about Halloween in their journals. C.K. praised their efforts. The children eagerly showed their writings to visitors.

Children moved in and out of the room constantly during this period. In spite of all that was happening, the noise level was quite low. When asked why she employed small group centers for instruction, C.K. replied:

In a multi-age class grouping, when you organize

> your room with things that are interesting to kids and you let them pursue their own interest in learning, the kids will have their own choices, they will go to their own spots. I very rarely pull a group in the a.m. I run a.m. like a kindergarten experience play group. I allow choice, they make decisions on their own.

When C.K. did call work groups together, she selected students with similar instructional goals for a mini-lesson. For the rest of the centers, however, C.K. was flexible in the way she places students in groups. She reported that:

> I like the opportunity that multi-age grouping presents for the teacher to do a very intense kind of instruction with small groups of kids. For example, if there is something a group of first or second graders need to learn, it is so easy to sit around a table and have four other students here, as opposed to having 26 and being in front having to teach all of them the same thing at the same time.

This practice of forming informal work groups and the frequent use of small groups in multi-age classrooms was also confirmed by statements made by the principal, P.O.:

> We often use work groups. I have seen teachers set up small groups and I have seen teachers make suggestions to kids about removing or including others in the groups. But, generally, the small groups are informal.

As the morning proceeded, all of the "centers" were busy with activity. A parent volunteer supervised the art center with paints of orange and black on the easels. The cutting and pasting had moved from the hallway onto a table with string, styrofoam, and tin foil filled shoe boxes added to the magazine cutouts.

At first glance, it seemed as if C.K. had gone. She did not dominate the room; the children and their activities did. She was seen observing an experiment at the science center, listening to a discussion at the writing center, and sitting in the

teacher's chair, preparing another activity.

Since the room was divided into a number of interest centers, so richly equipped that even five-year-olds could proceed on their own, the teacher was free to wander around the room, helping as needed and intervening as necessary.

There were rules to govern the small group "centers." A sign above the art area said, "No more than four students at a time." There was a list on the chalkboard of the activities for the day and a brief schedule. C.K.'s schedule for the morning read:

meeting

centers

snack

story

recess

The list of activity centers was also on the chalkboard for the day; it read:

science

listening

art

writing

cut and paste

puzzles

The full-day students are expected to visit at least four centers each day, according to C.K. Each child comes to the writing center each day. C.K. used work samples and work folders to check each student's work completion and progress.

* * *

C.O.'s classroom routine began with a class meeting around 9:00. Over loud talking, C.O. called each student's name. "Do you have lunch money?" he asked one boy. "Where is Tim?" he asked the group, but no one responded. "Let's have it quiet," said C.O. in a loud voice from his usual seat in the rocking chair. C.O. asked Jeremy to review the schedule for the day. C.O. pointed to Jeremy, who began reading: "9:00 - meeting; 9:30 - choice; 10:00 - gym; 10:30 - recess; 11:00 - reading; 11:45 - clean-up; 12:00 - lunch; 1:00 - choice."

C.O. described the purpose of the daily schedule:

> I generally write on the board a schedule for the day, a typical day, if I have one. Students have a reading journal, each has a math journal that they are expected to work in. The structure is loosely held together, but it is there to show kids that I care about what they are doing. As long as kids are purposeful, I'm not rigid at all.

C.O. had a class meeting in the morning, and this was the only scheduled large group instruction time of the day. C.O. reported, "Class meetings I really try to enforce. We talk about the day and take time to interact with each other."

C.O.'s class continued with their meeting. "We will be at choice until 10:00," C.O. announced. "What are some good choices?"

"Math!" shouted one boy.

"Drawing," said Jessica.

"Journal," blurted out Dave.

"Legos," said Adam.

C.O. affirmed each choice as acceptable with a nod of the head. He then announced, "Some of us will be reading. Let's go to choice now."

The students dispersed to many areas of the classroom, and four or five boys

extended their activity into the hallway where J.G.'s class was building with blocks and flying paper air planes.

John, a first grader from J.G.'s class, described his day. "These are my best points," he said, about the building blocks. "I like choice time," offered John. "Sometimes everyone has to do things like science and circle time."

Back in C.O.'s classroom, the noise level was high and the activity level was frantic. The furniture from the kitchen area was being rearranged, shoved into the corner by two girls, who wanted to use the climber. A small argument broke out.

"Zack is the dumbest kid in the world," said one of the girls.

C.O. intervened. "How can we work together?" he asked. "Share some space together and see if it will work."

C.O. explained the effect of the noise level when so many small group and individual choice activities were going on simultaneously. "Noise is a bigger issue," explained C.O. "It's a philosophical thing. I feel like children need to move, they will learn better when they are more active. Motion is tied to how much students are going to remember."

C.O. returned to the rocking chair. Seven students were seated on the couch or on benches in the meeting area. C.O. leaned over and picked up an Arabian Nights picture book. He began reading and showing the pictures to the group. Five of the seven were intently listening. The other two were drawing pictures. In other sections of the room, two boys and two girls were making a graph, using graph paper, of how far their paper airplanes flew. Some of this group had been in the hall earlier and one girl explained that this was their "math journal." One of the other boys reached in a file box on the shelf and proudly produced his "math journal" that

contained drawings and graph paper. Around a large table in the back of the room, seven girls had a container of beans and a box of geometric shapes on the table. Some were counting, others watching, and three others were talking about a stuffed animal named "Hopper" that one student had brought from home.

Part of the class group was still in the hall. Talk was going on all the time in the hall and in the classroom. The children seemed to know just what they wanted to do, where to get material, and how to conduct themselves. It felt as if the students were in control of this classroom, that it was their room. Except for an occasional command from the teacher, a "Be quiet" or "Put that over there" or "John come here," there was little teacher intervention.

As 10:00 arrived, an adult entered the room. "Time for art," announced a student. C.O. moved toward the door and instructed the students to "get in line," a seemingly uncharacteristic command. C.O. explained that these changes in activity are difficult for his class. "I use my voice. Sometimes use the lights. Kids don't like transitions."

The art teacher led a mass of students from the quickly disintegrating line down the hall. Some students were left behind, putting away materials, looking for their shoes, and talking with C.O. It took five more minutes before all the students had left the room. C.O. announced that he was "on break" and disappeared across the hall.

In C.O.'s class, there seemed to be a plan of the day, but few fixed periods. The fixed periods appeared to be morning meeting, the "specials" of music/art and gym, lunch period, and recess period.

In C.O.'s class, there seemed to be no time schedule for rotation of work

activities or a time frame for work completion. At any point in the day, a child would pick up where they had left off after a fixed period or would begin a new activity. Students were free to select working partners or to work alone during choice periods. During most observation periods, students were all engaged with at least one other classmate. There were some individuals working alone with a writing task or on the computer. But rarely were they alone for more than a few minutes; others would wander in and out, curiously observing their activity or would engage them with questions or comments. C.O.'s class was the least teacher-structured of the classrooms observed. The math and reading periods on the schedule were not observably different than the other choice periods. The in-classroom time was observed to be a continuous flow of student activity except for the fixed periods in the schedule.

Using yet another system for small groups, J.G. explained in an interview how she regrouped students on a day-to-day basis, in an approach that combined group rotation in subject area time blocks and student assigned small groups that changed as projects are determined or problems arise. She explained:

> Four groups of students (six or seven per group) rotate to four different activities: reading, math, choice, and writing. We rotate activities in blocks. We average around 30 minutes, but it varies. This way I reassure myself that there is a daily focus.

Although the use of small group instruction was a pattern common to multi-age classes at Hill School, the variety of formats used by the teachers in planning their day was vast. No two classes, even in the same school, were exactly alike in the way that small group instruction was organized. Some teachers consciously formed small work groups of students that traveled together throughout the day from activity

to activity. Other teachers limited the numbers of students at any activity area, learning center or station, but allowed students to form their own groups for the most part, calling together certain students for specific instruction. Others planned individual contracts and then allowed students to form their own groups and select their own activities without a scheduled rotation. Others combined these approaches to small group instruction.

Rationale for Small Group Organization

Teachers at Hill School utilized small group instruction to enable them to manage classrooms where varied student ages, needs, and interests are represented. Other reasons for the utilization of small group organization included the usefulness of small group interactions to foster the development of social skills and the opportunities that small group work presented to accommodate individual differences. Teachers also utilized small group organization to enable them to employ instructional methods that enhanced instruction for the older students and that allowed for intensive work with student groups that needed direct teacher intervention. Examples of these strategies and examples of small group learning in action illustrate the fundamental for the use of this type of classroom organization by teachers.

Teachers decided to use small groups as the primary method of teaching and learning in multi-age classrooms because small groups helped students develop social skills as well as cognitive skills. During "choice," Nicki was sitting in a bean bag chair when she was approached by Judy and Mary from her small group. Judy and Mary had play plates and cereal boxes from the kitchen area. "Do you like Fruit Loops?" asked Judy. "We're playing cooking," she continued. "Here is the menu." Nicki

looked at the menu written on a piece of construction paper. The two girls asked Nicki what she wanted to order. I asked them about their activity, and the girls explained that they were waitresses and that Nicki was ordering from the menu. The three girls poured coffee and juice and said the cereal names. The "choice" interaction demonstrated social learning of relationships, community experiences and appropriate play skills.

S.W. described the need for students to be able to engage in play and express their feelings to peers in order to grow socially. When asked about the social benefits of small groups made up of different ages, S.W. explained:

> The class works better when students feel free to talk to peers about their feelings and experiences. I encourage students to express their viewpoints. This is easier to do in smaller groups. Smaller groups where students are familiar with each other are safer.

At the "special" area, Polly, an older girl, and Nicki, a younger girl, sat with their group working with rubber bands on geoboards. Randy, the older boy in the group, joined into a discussion. "Randy likes girls," announced Polly. "He is definitely cool," said Nicki. Randy, looking red in the face, denied any embarrassment. "I don't like girls," he said, "except as friends." Social conversations frequently occurred during small group instruction. S. W. overheard the above conversation and did not comment. Talking was allowed during small group activities, even if the conversation was not directly related to the designed activity. S. W. recognized the value of "social conversation" during a formal interview:

> Students definitely need to have the freedom to share social ideas and to do it without adult intervention. Children have so many ideas that they need to express.

S.W. used a class meeting to describe student roles and responsibilities for

helping others. She asked the class, "How many learners are in this class?" A student responded, "Twenty-five." "Well, there are twenty-six learners in this class." She identified herself as a learner, too. "We have twenty-six learners and twenty-six teachers in this class," said S.W. "We all need to help each other learn about people, as well as learn new things. Throughout the year, the class works on how to be good teachers as well as how to be good friends."

During an interview with a small group of students, the children were asked, "What does it mean to be a friend?" "A friend is someone who cares about you and is nice to you," said Maria. "It's someone you can tell your secrets to," said Mary. "Mike is my friend," said Hal. The students in the class talked openly about friendship and expressed the importance of having friends. The students generally named more than one friend in the class.

Social skill learning was an area of emphasis for instruction in this multi-age classroom. Students played a role in selecting small group members and demonstrated an ability to interact socially with their peers in the classroom. Teachers used small groups as the primary mode of instruction because small groups provide an orderly way of accommodating the range of levels of academic achievement among the students. Small groups were used to challenge the older, more capable students as well as to enable older students to help younger students learn.

When asked why small groups were seen as an effective method of student instruction, S.W. stated,

> Any honest teacher will admit that even if they have the same age in a classroom, they still have a range of three to four years in terms of skill development anyway. So,

> the only honest way to teach to that is in small group or individually so you might as well make it socially comfortable.

S.W. went on to explain,

> In a multi-age class, by using small groups, you can expand the range more because you have the advantage of a family grouping practice where you can keep the same students in the same classroom for two or three years. This a tremendous advantage for both kids and teachers, and you lose less time.

In a multi-age setting, the teachers used small group instruction to enable more capable students to help less able students, to make schoolwork more socially comfortable, and to organize the class into content areas for instruction. In addition, the teachers planned activities for the older and more able students in order to challenge these students. In multi-age classes, when the teacher is instructing younger students in reading, writing and basic computations, older students worked independently with peers or in small groups.

S.W. assigned a group task so that older students worked on independent projects related to their interests. "Alright, everyone," announced S.W., "we are going to second group. Listen, everybody, one...two...three...four...O.K., real quiet. We are going to second group, but for written work, I need to see Nicki and Beth." S.W. called over the two younger girls from the group and had them sit down by her chair. She then gave directions to Mark, Mary, Bill and Jody, the older group members. "Please give me your packets, " said S.W. as she collected their papers. "I want you to work on your journals," said S.W. to the two boys. "Mark did a wonderful job on this one, then you can work on your fair project." She gave the two girls math books and opened the book to the pages she wanted them to work on. Then, S.W. rejoined

Nicki and Beth. The older students talk about their journals, followed by ten minutes of silence except for some moving of chairs. The teacher had materials ready for the older students to work on individually while she was working with younger students. Open-ended writing assignments, project work, working with partners and workbook assignments made up the activities assigned to older students to challenge them. In multi-age classes, particular attention was paid to the needs of these older students to insure that their educational needs are met.

* * *

When a group was working on a measuring lesson, Pat, Jeff and Tim struggled to measure the length of a list of classroom objects that were written on the board. Bill, an older student, was approached by S.W. She explained that while the others were measuring the length of objects, Bill could make up a worksheet for the others to use the next day. Bill went about the room finding objects, writing down their measurements and writing down questions on a ditto. The questions included: What object is five inches long? The list of choices included a desk, a door, a pencil, a paper clip. How far is it from the computer to the windows? Choices were three feet, five feet, 100 feet. Bill, a third grader, developed a list of five questions. He was helped by S.W. to phrase the questions. He checked three times during a twenty-minute period with S.W. The questions he made up were to be used as the lesson for the next day for the younger students.

When Judy and Tom, two older students, were in their written work small group, S.W. brought out a math workbook for each of them to work on. She assigned pages that involved multiplication and gave them instructions to work together on the problems assigned. S.W. checked on their progress during the lesson

period and collected their pages at the end of the small group session. The younger students, during this lesson, worked with S.W. on the concept of greater than and less than with manipulative materials from the Math Their Way program.

In an interview with S.W., she described how she planned to build on subjects to stretch older students.

> You can never know everything there is to know about a subject. The important thing is for students to be engaged in learning, learning how to learn, being interested in learning. I do a little pull out thing with the first graders, practicing writing numbers or letters. The other students and I agree on project work they can do individually or with a friend, and if they are not engaged, I have a backup task in mind.

The teacher planned for individual work for older and more capable students in the classroom. In addition to the independent and small group-assigned tasks, the teacher also expected older children to help students who were younger or less able. S.W. described how she planned for older children.

> I worry about stretching the older students, so I plan mini-lessons and then have a spiral notebook for journal writing and math sheets for them to work on independently or in small groups.

Other teachers expressed similar concerns about insuring that the more advanced students were challenged. L. B. described how she challenged her students:

> I change the expectations for things, like book reports. For kids that are advanced, I make sure I stay in touch with their levels, their interests. I have higher expectations for some students in the quality, quantity and difficulty of the work I assign.

P.O. expressed a concern about overuse of older students in a tutoring role. P.O. explained:

> Just because you have multi-age, you don't want

> to use the older kids to do all of the teaching. We need to make sure that the older students get what they need from the teacher.

Other teachers planned independent work projects for older students in their class. C.O. utilized contracts with older students in his K-1-2 classroom to challenge more capable students to take on difficult projects.

* * *

C.O. sat next to Joan, an eight-year-old, on the couch in the classroom. He was reviewing her "portfolio" with her. Joan's portfolio consisted of two watercolor pictures, four illustrated stories that Joan had written, and some pictures from a magazine. Joan is overheard telling C.O. that she wants "to be a teacher some day."

The theme of Joan's work is a collection of flowers. Watercolor pictures show colorful flowers and rainbows. Joan's stories are about flower buds turning into bloom and a sunflower that turns into a giant plant. C.O. gave Joan directions about her next assignment. C.O. explained to Joan that she is "responsible enough to go to the library" to get a book about plants or flowers and to continue with a written report about the subject. Joan evidently had never done this before and asks C.O. to go with her. C.O. enlisted the help of another girl to accompany Joan to her destination. The two headed out of the room without delay.

* * *

In C.K.'s class, at the science center, the teacher called over a group of four to a lesson on measurement. There were ditto sheets passed out by Julia, who said she was seven years old. On the table were rulers made of cardboard with eight marks on them that approximate inches, and assorted objects. In a pile in the center of the table were paper clips, pencils, peanuts (in the shell), spoons, a screwdriver

and a pair of scissors. C.K. demonstrated how to measure each object and enter the corresponding number on the ditto sheet next to the object pictured. Instructions were given to "Put your name on the top," and then the activity began in earnest. The four students called to the center were the largest physically in the room, all four girls, and each was able to write the numbers on the ditto without reversals. The four girls were joined by three other students from the class, who stood behind the seated workers, looking over their shoulders in silence. The entire activity took less than five minutes and was followed by a question-and-answer session with C.K. Which thing was the longest? How long was it? Which was the shortest? The questions continued of the four participants. They were then given instructions to find other objects to measure and to write down the length of each on a paper that was left at the science center. C.K. said she was available to help with the words.

* * *

In other classrooms, older students spent time with teachers during small group teacher-directed lessons. In J.B.'s class, seven students were seated around a box of leaves that had been collected on a prior day by students in the class. These students were identifying leaf types and pressing the leaves in books with labels written on small pieces of paper. J. B. showed the group how to look up the type of leaf in the Golden Book that he was holding. He pointed out the shapes, teeth and veins in the leaves and compared the specimens to the pictures. J. B. had a collection pressed in a book from a prior year that he also offered as a resource for identification of the types. Meanwhile other students were engaged in other areas of the classroom, without intervention from the teacher.

J.B. described how he can work with advanced groups while maintaining

meaningful experiences for other students:

> Children are encouraged to make use of resources other than the teacher. The children are sufficiently independent to allow me time to concentrate on individual children, or work with small groups. Each child's pace is different.

A teacher spending time with advanced small group work yields advantages for the other students in the class, according to the teachers at Hill. Virtually every teacher noted that students would observe the lessons being taught and would benefit from a "preview" of future instruction. The pattern that emerged from observations was one of the younger students watching the teacher and the older students as instruction was underway. This "preview" of upcoming learning was consistently pointed to as a benefit for younger students when small group organization was employed in multi-age classes.

How Small Groups Are Formed

The primary organizational structure for instruction in a multi-age classroom involves students working in small groups. When forming groups, the teachers took into account the social compatibility of the students as well as factors such as gender, age, and ability. Information obtained through the data collection process illustrated how teachers form small groups and documented the considerations used by the staff when planning student work groups for instruction.

* * *

"It's time to re-seat people," announced L.B. "Monica has raised a concern that this is the second year she has been in the same area. My concern is that I want to have you choose your seating, but I also want you to meet new kids." She continued, "I see that students I had last year are seated together, and the new kids

are seated together. I want to mix you up so you get to know each other."

Dan spoke up. "I don't want to be with Jake. I want to be with Luke and Sean. I want at least one old friend."

Jill raised her hand to speak. "Our table has new kids as well as us. It already looks mixed up."

L.B. interrupted, "Put two other things in mind. I don't want all boys at one table or all girls. I want to keep at least a friend with a friend."

"I feel lonely back here in the corner," said Ben. "I want to move."

L.B. continued, "I want to do it this week. I'll give us time to think about it. I'll get back with you. When do you want to discuss it again? How many want to discuss it today?" asked L.B.

Fifteen student raised their hands.

"How many want to discuss it tomorrow," asked L.B.

Four students raised their hands.

"O.k., we'll talk about it for 10 minutes after art." The students were then dismissed.

The previous scenario in L.B.'s class described one type of whole class activity that was characteristic of multi-age classes: the class meeting. In the context of this example, certain factors were reviewed that teachers consider when forming small groups. In L.B.'s scenario, she considered the gender of the child and her desire to have new students work together while maintaining at least one friend in the group. These considerations are part of a consistent pattern used by teachers that deliberately match small groups for instructional purposes. In addition, L.B. described other factors she considers when forming student work groups.

> Within the classroom when making small groups, like six people at a table, I almost always intentionally mix the ages to try to get them to have a model to look over at.

The teachers at Hill School considered many factors when forming small groups that travel together throughout the daily routine or for specialized instructional periods. There was, however, a tendency to avoid formal roles in groups.

In her description of cooperative groups, P.O., the principal, described how cooperative grouping at Hill differed from the formal system described in the education literature:

> Most of the models for cooperative grouping taught in inservice are very structured and teacher oriented. The concept of cooperative learning is one we believe in. We do expect students to work with each other. But, I don't believe in the rigid roles in the, quote, cooperative grouping. You have to be the timekeeper, you're the recorder. Our process is much more flexible.

In an interview with S.W., she described the considerations she used to form the work groups.

> The social consideration is probably the number one consideration in forming groups, but I also try to see that they have someone who is compatible as a working person. I try to have three or four persons who are advanced and do independent work in with a couple of students who are low down on the spectrum and need a lot of attention.

In forming small groups, both S.W. and J.B. stated that they tried to have a combination of able and less able workers in each group. In addition, S.W. took the age of the students into consideration when forming groups. "I like to have at least a two-year range, and at this time in the year, each group has three ages in it."

When Nicki was asked who was in her group, her response was "my friends." When asked why her friends were in the group, Mark interrupted with, "I picked Paul." The students had a role in developing the small group makeup.

In a formal interview with S.W., she described the students' role in forming groups,

> Students have input into who is in their group. Friendship is the major criteria for group formation. I tell students to put down on a piece of paper the names of two or three friends they would like to work with. I tell them I'll do my best, but I'll make sure at least one of their choices is represented. Social thinking is number one in group formation.

As the teacher in a multi-age classroom selected students for small groups, social considerations, the age of the students and student preference were taken into account in creating the small groups that are the basis for student instruction in the classroom.

Other Instructional Practices

The use of the small group instructional format dominated the school day for students in multi-age classrooms. Within these small instructional groups, teachers employed other instructional practices to enhance the operation of the classroom and to maximize student learning. Contained in the following section of the chapter are examples of situations that illustrate and analyze the use of these practices.

Instructional practices in the multi-age classrooms observed included the use of student tutoring and peer empowerment strategies to enhance instruction for all students. Teachers used class lessons for one group as previews of future instruction for other students.

The multi-age classrooms observed were set up to allow students to engage

in play activities that were self selected. In these classes, time was set aside for students to play with each other. Student play was viewed as being of legitimate educational value.

Teachers in multi-age classes did use a limited amount of large group or whole class instruction for specific purposes. These whole class meeting sessions were generally used to review rules, go over procedures or introduce new instructional units. Occasionally, classes joined together to hear speakers, attend assemblies or observe lessons that were difficult or time consuming to set up.

Teachers utilized various methods to evaluate student progress and report learning outcomes to parents. Assessment of student outcomes was closely tied to daily instruction. There was little evidence that teachers used standardized achievement testing for student grouping, instructional planning or student evaluation.

Illustrations of how the instructional methods and practices that were frequently observed in multi-age classes operate are provided under topic headings in this section. Teachers relied heavily on peer tutoring and cross age tutoring experiences to enhance student learning and to enable individual differences to be accommodated. Student-helping-student strategies were used in a variety of ways at Hill School. These strategies are described and analyzed under the first topic heading.

Contained under the topic heading of "Students Preview Future Instruction" are illustrations of how teachers utilize opportunities for students to preview future instruction to help students learn. This technique particularly assisted the younger students in the class to get prepared for new learning experiences.

Descriptions of student "play" activities are described and analyzed under the

third topic heading. Reasons given that relate to the importance of play for the social and cognitive growth of children are reported.

The section entitled "Whole Class Instruction" contains information about the types and purposes of large group instruction in multi-age settings. Described in this section are the class meetings and orientation activities that teachers schedule.

Reported under the final topic heading in this section are data describing the ways that teachers evaluate student progress in multi-age classes. Reasons for the use of specific evaluation practices are reported and analyzed.

Students Help Students Learn

Teachers in a multi-age classroom setting exhibited patterns in their instructional planning that utilized small group instruction to facilitate student interactions. Students were frequently observed to be helping each other with teacher-assigned or self-selected schoolwork. This pattern included older students helping younger students in the "reading buddies" program. "Reading buddies" was a school-wide, formal teacher-designed program where students of different ages and different classroom levels were purposely paired together for reading instruction. This pattern of older students helping younger students was also frequently observed within each classroom group. Similar age students were also frequently observed to be working together in a "peer tutoring" format within each classroom. To a much lesser extent, instances of younger students helping older students in academic and social situations were also observed. A pattern emerged from these observations of multi-age classes that demonstrates that students are expected to help each other learn, that teachers provided direct instruction to students on how to help each other meet learning goals, and that teachers consciously utilize student-to-student

interactions as one of the primary methods of instruction in multi-age classrooms.

When engaged in small groups in a multi-age class, older students, and students who are more capable at school work, find themselves helping other students who are younger or less competent in academic skill areas. In order to take advantage of this student-to-student helping role, the teacher planned lessons to teach students how to help each other with academic assignments. Students in the multi-age classrooms received direct instruction from the teacher on how to help other students with class work.

* * *

Danny and Mark are classmates in a multi-age classroom for six- through nine-year-olds. They frequently sit next to each other during a learning period called written work. Danny, the older of the two children, reads Mark directions for assignments during written work and other periods of the small group assigned times. Danny and Mark sat next to each other at a table in the center of the room. The total instructional period lasted thirty minutes.

About five minutes after the teacher directed a change of activities, both boys were seated with paper and pencil, as well as ditto sheets that were in their reading and writing assignments. Each student had a different ditto sheet. Mark's assignment was to finish a sentence by filling in the missing word from a list of words on the paper. Danny was to finish an open-ended story that began with a starter sentence.

"How do you do this?" asked Mark. Danny told him to write in the word that fits. After a few minutes of silence, Danny got up and returned with another paper from his work tub. "I don't know this word," said Mark. He repeated this again.

"It's enemy," said Danny. The two boys continued to sit quietly, looking around the room, occasionally writing or erasing on their paper. After a few minutes, S.W., the teacher, stood behind the boys. "Are you having trouble with the words, Mark?" asked the teacher. "Is Danny helping you?" Mark nods. "That's great," says S.W. She went on to explain, "When Mark doesn't know a word, we can help him by having him try to say the word, rather than telling him what the word is." She went on to find a word that Mark did not know. "Can you help him with this one?" asked S.W. "Is it splake?" Mark asked. "No," said Danny. "Sploke?" guessed Mark. S.W. reinforced him for a good try, then read the whole sentence to see if sense could be made of the word in context. The sample was: He _____ to the class about his trip. S.W. explained that if you try to say the word, and then you try to read the sentence to make sense of the word, and you still do not know what it is, then it is alright to tell him the word. This five-minute segment ended with S.W. telling the word to Mark. Instances like this were consistently observed throughout the school day.

* * *

In C.K.'s class, a young boy (six years old) was copying words from the board onto a piece of paper. C.K. had written "Dear Shana, please come on Friday." The boy slowly copied the words off of the board and gave the paper to C.K., who put it in an envelope and gave instructions to Jenny to "Bring this to L.L.'s class." C.K. explained that Shana was Bobby's ready buddy and that Friday was a special day when Bobby's father would be at school. Bobby wanted his father to meet his reading buddy.

* * *

A group of four kindergartners from C.K.'s class proceeded down the hall to

L.L.'s room. L.L.'s class was waiting for their reading partners at 10:15. "Please come and read to me," said one of the students, and the pair walked into the hallway and around the corner. A 4th grader, Leslie, had selected a picture book to read to her partner. They spent 30 minutes together talking about the pictures.

C.K. described one of her feelings about the olders working with youngers experience:

> I do believe that older students helping my kids is a tremendous way to learn to read. We take advantage of what we call reading buddies with the 4th and 5th grade class.

L.L. described an unanticipated benefit of the reading buddies program:

> I have some kids that find it difficult to read with the teacher. They are shy and very anxious about their reading. When my 4th and 5th graders do reading buddies with C.K.'s class (K-1-2), all I have to do is get nearby and listen and it gives me a feel for where they are in their reading.

The olders helping youngers pattern extended beyond the formal reading buddies activity into other aspects of the school day. C.O. described how he utilized upper elementary students, "I can always use another pair of hands. I have upper elementary students help with big projects, like bulletin boards, charts or displays." O.K. described how students from a 3rd and 4th grade class help her early elementary students, "The older children help students that don't have the fine motor control, that can't put on a rubber band or that can't mix the paint."

An example of this occurrence in C.K.'s class involved Jessica, a 4th grader, who according to C.K., "Needs opportunities to be creative in a non-threatening environment."

* * *

At the art station, C.K.'s students were making pumpkins, cutting out the shapes for the eyes, nose and mouth and then gluing them on a pumpkin shape and decorating the project. Jessica, a 4th grader, was helping. She would help some students with cutting, got more paste out of the canister, and helped students put their finished project away in their "cubby" after it was done. After Jessica had finished helping the other children at the art center, she approached the teacher, and asked, "Could I make one, too?" C.K. agreed and Jessica began her creation.

C.K. explained how the older students reacted to their tutoring role:

> L.L. has some low readers and reading to my kindergartners builds their self-esteem. They can read these books. My kindergartners have no way of knowing that these simple books are at their reading level.

L.L. described how she saw the experience with tutoring helping the older students.

> Sometimes, there are more benefits for the older than the younger kids. It gives them a chance to read something simple without any sigma attached. It also helps older kids develop a better attitude toward younger kids. When they see a younger kid getting picked on on the playground, and it's their reading buddy, they try to help them. We get sociological value from cross-age grouping.

Both formally and informally, older students in a multi-age classroom served as models for younger students. Younger students mimic the behavior of the olders, and the teachers model behavior for all the students. Modelling occurs in academic settings as well as during social settings. Younger students also shared ideas with the older students. The music teacher, W.L., explained his observation:

> The younger kids learn from the olders, too. The young ones come up with an idea. The olders say, "What?" But after a while they see that it's a viable

idea.

* * *

An example of how peer helping occurred outside of the classroom setting was observed at recess. Two younger girls were chasing each other around the playground and went outside of the fence. Tim, a third grader in L.B..'s class called to them, took one of the girls by the arm and brought her inside the fence. "What are the rules?" asked Tim. "We don't fight," responded one girl. "Stay in the fence?" questioned the other. "I'm taking you off to prison," said Tim, who took them by the hand, running toward the climbing set. Tim helped the young girls review the rules and then diverted them to another activity. When asked why he did that, he said, "The teacher said I should help the other kids learn the rules and stuff."

* * *

During another instance in a classroom, students helped each other learn classroom rules and procedures. The bathroom in S.W.'s classroom had a sign next to the door. On one side of the sign was the picture of a stop sign and the word "stop;" on the other side was a green circle and the word "go." An older girl walked into the bathroom and found it to be occupied once she was inside. She quickly went back out and was immediately followed by a first grade girl who was exiting the bathroom. Rachel, the older girl, said, "When you go in the bathroom, you're suppose to put over the stop sign." Rachel demonstrated for the younger girl by turning the sign to "stop." "That way I know somebody's in there. And when you leave the bathroom, you flip it to 'go.'" The students helped each other in both academic and social skill instruction.

During a class meeting, S.W. demonstrated for the class a way to help a friend

when they were having "trouble" with the rules. S.W. described to the class a "real quick flair-up" where two students were chasing each other around the room. "It is a right we have to all be safe. What could have happened by the chasing?" Numerous students raised their hands. She called on Dan. "They could have bumped their heads." "We shouldn't stick out our foot," said another girl. "We have rules for good reasons," S.W. explained. "Everyone has the right to be safe, and we have to help each other to respect that right." An older boy stated that when he sees someone not being safe, he walks away and tells a teacher. Another student said they should sit quietly for a few minutes. S.W. recognized these as good strategies to use when people are not following safety rules. The teacher used the class meeting to explain classroom rules and procedures and to model for the students ways to intervene without getting angry.

In his formal interview, J.B. explained,

> We are modeling for the kids, too; the teachers are models, too. We can show them that when things don't go their way, don't get angry; they watch how the teacher handles the behavior and learns from the teacher how to handle conflict.

Not only the teacher, but the students in multi-age classrooms play an important role in helping each other learn in both school achievement areas and social skill development. J.B. explained that for the third and fourth graders, helping first graders clearly has benefits for both groups.

> It helps the younger kids by seeing a model. It also helps my kids (fourth graders). It gives them the responsibility and helps reinforce their learning. They practice their skills, they need to put the information in a way that reaches the younger people, and this takes a lot of thought.

In each classroom at Hill School, teachers structured options for buddy reading and other projects where older students could work with younger students in a one-on-one or a one-on-two setting. Every so often there are structured activities where there was a project that formally paired up older students from J.B.'s room to teach youngster students from S.W.'s room. The examples given by J.B. included a measuring project and a shopping-with-money project where his students designed the activity and took the responsibility for teaching one or two first or second graders how to use a measuring devise or count money to make purchases. J.B. explained the benefits of olders helping youngers.

> The older kids with a little more experience can model or guide the younger kids through the activity. With peer helpers, you can do more active hands-on learning. Because they all get hands on, and it's not just the teacher showing or saying, 'Do this; do that.' It helps me be able to individualize.

* * *

In S.W.'s class, an older fourth grade student sat with Nicki, a first grade girl, as part of a "reading buddy" activity. S.W. announced, "If you need a reading buddy, come to this table. Silent reading is next door." The fourth grader and Nicki sit under the table with a commercial trade book. S.W. offered that "Nicki is one of my youngest; she was just five when she entered the classroom. She needs to be read to." Nicki listened to Sylvester and Tweety as the fourth grader read. "The last page is going to be funny," said the older girl. Both girls laugh and then Nicki took the book over to another girl, who was seated nearby. "The last page is funny," said Nicki as she opens it in the face of her friend. Nicki's behavior copied that of the older student she was reading with.

* * *

Activities are planned throughout the day so that olders help youngers learn. When S.W. gave out a ditto on silly stories, she told Mary to help Nicki with the story starter. Mary began to read the story starter to Nicki. "I saw a silly being . . ." It's not an earth person," said Nicki. Mary wrote down the words that Nicki just said. S.W. told me, "Nicki is the youngest child in the class; she needs someone to read to her and write down her story." Mary continued to write down Nicki's response to the story starter. S.W. reviewed the work a few minutes later. She directed Mary to read the story that Nicki had just "written" back to her. After Mary did this, Nicki colored the picture.

Three times per week these teachers planned for reading buddies. Fourth and fifth grade volunteers would come into S.W.'s classroom. The students in S.W.'s class would choose a reading buddy from the older group. They did not have to select an older partner but were encouraged to do so. The partners would select a trade book from the shelf. On this occasion, Marla, a fourth grader, brought a book with her. Marla asked Nicki if she wanted to read with her. The brightly illustrated story was A Whole in the Bottom of the Sea. Marla said she got it from her mom's store. She sat down at the table and read aloud to Nicki.

In addition to the reading buddies activity, the two classes also planned for a book discussion group, made up of a mixed-age group from the two classes. These groups meet weekly to discuss a book they have been reading. S.W. explained, "The older students read to themselves, the younger ones are read to at home, or we set aside time during the day for one of J.B.'s students to come and read to the children in my class during reading time." The discussion group allowed for modeling to occur

and built interest in reading for both the older and younger participants, according to S.W.

* * *

In C.O.'s class, four students from a 3-4 class across the hall came in each day to help during choice time. Amy, a 3rd grader, used to be in C.O.'s class and now she came in to help each day. In doing so, she "gets what she needs," according to C.O., because she still has the need to play and do hands-on activities due to her maturation level. C.O. stated. "She can do that for 15 minutes, sometimes up to one hour, each day. She gets her needs met while playing a helper role," according to the teacher.

Amy and three other students took direction from C.O. "Go help in the computer area," he directed. One of the volunteer helpers was directed to help James and Tim with their graphs. Amy pulled a puzzle of the United States off the shelf and joined another table of children who are playing Shark Attack, a board game. Amy eventually joined in the fast-paced game. She rolled the dice and called out the colors as the boys moved their game pieces around the board.

O.K. shared the perception of many teachers that cross-age/cross-class experiences are positive, but injects a caution:

> There is an opportunity for older children to share and nurture. They grow from it. But, the olders are not always reinforcing their learning or learning something new if the 5th graders are helping first graders all the time.

In addition to teacher planned cross-class tutoring and programs like reading buddies, there were also examples of informal, same-age peer and cross-age tutoring and modeling occurring within the classrooms.

* * *

Michael, Raphael and Susan sprawled on the floor by the teacher's chair in C.K.'s room. "We practice our words whenever we want," announced Susan, beginning to say words out loud as she wrote them in a spiral notebook. Raphael said this was his journal. "King," said Susan as she wrote it in her journal. Michael and Raphael wrote quickly to catch up. "Best," said Susan. The boys wrote it down. Lauren and Katie joined the group, lying stomach down on the vinyl floor. "I have 40 words in all," announced Susan. Lauren and Katie were younger than the rest of the group. They had no paper or pencil. "Hat is so easy to spell," said Michael as he wrote in his journal. The three older students continued with a few more words, counted the words on their list, and moved on to another activity at the writing center.

Katie and Lauren got paper and markers off the shelf and began to say words and write them on their papers, imitating the activity the older students had just completed. They started with their names, then added tree (spelled te) and table (spelled tbe) and the name Zack, which they copied off the blackboard. The two girls checked each other's list.

"Boys and girls, it's time to go," announced C.K. "We will have a snack when we get back from the library."

The girls left their paper and markers on the nearby bench and headed toward the door where C.K. was standing.

* * *

In C.O.'s class, Brandon, Gary and Ron worked together on a math lesson. It was a ditto page where you found the answer to an addition or subtraction problem

and then used the number to break a code and find the mystery message. Brandon began by giving the answers to the first two problems and showed each boy the corresponding letter that went in the blank.

"Do you see how to do it?" he asked. Ron gave a nod and solved the next addition problem by counting on his fingers. "It's o.k. to use your fingers," said Brandon.

The problems proved more difficult for Gary, who constantly looked at Ron's paper and copied the answers. "Guess who is a math whiz?" said the message once it was finally completed. "Do you care if I copy yours?" asked Gary. "It's o.k.," said Ron.

* * *

Clara and Nicki, both 1st graders, watched Rebecca use parquet blocks in S.W.'s room. "That looks like a flower," said Clara. "When you get finished with that can you help me? Can you give me an idea?" she asked again.

"How do you like this, Clara?" asked Nicki.

"You're the world's greatest artist," said Clara.

Once Rebecca finished her flower, she looked at Clara. "Do you want to make one? You can use my design."

Clara began to copy the design with the pattern blocks. Rebecca picked out the colors and shapes that would replicate her design.

J.G. offered her perception of when students helping students occurs. "In this classroom, I don't have to conger it up. It happens quite naturally because they are sharing the space." As a teacher of kindergartners, J.G. explained the benefits that mixed age students bring to the classroom environment:

> Your kindergartners grow into things. They sit by other kids and learn from them. You're free to quit stewing around with so much worry about direct instruction and showing kids how to do things. They have role models.

R.Z. described her approach:

> If someone asks me how to do something and I know there is someone in the room that can do it, I'll tell the child to go ask So-and-So. I don't actually structure it to say that right now he is going to teach you to do X.

R.Z. went on to describe the benefits of the reading buddies program for her upper elementary students:

> Our class does do learning buddies. They do great! For some of my older kids, it forces them to attend to reading more. Reading to a 1st or 2nd grader reinforces reading skills that they have. They get to practice more.

The teaching staff in multi-age classrooms at Hall School utilized, by design, formal and informal opportunities for students to help each other learn. The expectation was communicated to students that they had a responsibility to help fellow students with schoolwork. Direct instruction was provided to students about how to provide this assistance. Formal systems for cross-age tutoring were in place that benefit both the persons being tutored and the tutors themselves, according to the teachers. The utilization of these student empowerment strategies enabled small group instruction to be a feasible primary method for classroom organization in multi-age classrooms.

* * *

Students were provided with direct instruction on how to work together and help each other learn. In a large group setting, with students from the whole class

seated in the "rug" area, S.W. had students demonstrate to the rest of the class the correct and incorrect way to help others with their work. "Let's show Mr. Miller that we know how to help each other learn," said S.W. "Who wants to show him?" A dozen students raised their hands and two were selected to demonstrate peer-helping techniques. A sample math problem was written down, with Louis and Paul selected as volunteers.

$$\begin{array}{r} 15 \\ +\ \underline{14} \end{array}$$

was written on the paper. The teacher told Paul to show Louis how **not** to do this problem. Louis said, "Five and four are nine, and one and one are two, so the answer is twenty-nine." "Why isn't this a good way?" asked S.W. Three students responded that it was giving the answer rather than helping the person learn how to do the problem. S.W. asked the boys to try to do it another way that would be better. This time, Paul asked Louis, "What's five plus four?" Louis answered correctly on both counts and then gave the final answer to the problem.

* * *

L.L.'s 4th and 5th grade class shared a reading experience with C.K.'s K-1-2 class as part of the "reading buddies" program used in each classroom in the building. In a "reading buddies" orientation session, C.K. provided information to the older students in their classroom about both the social benefits and the instructional strategies that the older students could use to help the younger ones. "When you're a kindergartner, and you feel like nobody knows you, and then a big kid comes up and says, 'Hi,' it makes you feel important." C.K. went on to describe the role she expected the 4th and 5th graders to take in this relationship. "Guess what?" said C.K.

"I have good news for all of you. All of the kindergartners this year can read." There was silence in the room. "They can read the pictures. They can tell the stories back to you," she continued. "Read to them, but let them read back to you."

L.L. described how she prepared her older students for tutoring:

> There is direct instruction from the teacher to the older ones about what's expected as a reading buddy. They are coached the first few weeks of the program. The younger students have it explained to them; about what is going to happen.

Students Preview Future Instruction

According to the teachers in multi-age classrooms, when teachers provided mini-lessons or direct instruction to small groups of students, other students frequently watch the lesson. This pattern is particularly true of the younger students in the class.

* * *

During a reading group, the teacher, S.W., was reading aloud a book about how babies are born. S.W. described this as a "first grade lesson." Within a minutes after the reading began, two older boys joined the group of young children. After a few minutes, Jim, an older boy, asked, "Would you read that page again? I'm really interested in that part." S.W. read the page again and answered questions from Jim and two younger students.

During a writing lesson with board work, eight older students were writing with chalk on the blackboard, putting "ing" endings on work. Three younger girls watched the lesson while seated on the bookshelf nearby. They watched for a fifteen-minute period, and then went on to different areas of the room.

In an interview with S.W., she stated that all students were encouraged to

watch any lesson that interested them, but that they had to ask permission to interrupt the lesson or become part of the group. She went on to explain,

> I'm trying to sort of set up the old, one-room schoolhouse thing, where the younger students sat in the back and overheard the lesson being taught. That way they were familiar with the concept and the vocabulary, and when it came time for their turn, the younger children were better prepared to know what the teacher was talking about. Younger children frequently need reassurance. They tune into what's meaningful for them.

* * *

J.B. and S.W. began team teaching this year at the encouragement of the principal. The idea was to have students engaged in mini-lessons with one teacher, while the other supervised small group or independent instruction. On one occasion, J.B. was conducting a science lesson on sound and amplification. "Those who want to join can go," announced S.W. Five younger students went next door to watch. When questioned why she thought the older students chose not to go, S.W. relayed her perception that, "By third grade there is peer pressure that says it's not cool to pay attention." First graders were described as joiners and more likely to get involved in whatever comes along to explore. This may be one explanation why younger students were seen observing lessons more frequently than older students.

* * *

Not only were teacher-directed lessons of interest to younger students, younger students also frequently watched older students who were engaged in play or learning. When two older boys, Mike and Randy, were using a computer at the computer station to do a math facts activity involving equivalent fractions, John and Pat, two younger students, stood behind and watched for a few minutes. The object of the

activity was to identify fractions that were equivalent to an example fraction, move the cursor to the point on the grid, and push the return key to score points if the fraction was equivalent. The younger boys caught on that there were fractions that were the same and began to move closer to the older boys. In about five minutes, the younger boys were pointing to the screen saying, "There's one." "Get that one." Watching led to engagement in the activity and resulted in the four students learning cooperatively. The older boy, Mike, began another game and told the younger boys which fractions to look for. The younger boys were actually naming fractions as three-fifths and one-fourth by the end of the twenty-minute session.

The principal, P.O., shared her perception of how students learn by observing:

> While you're instructing six students on addition, you have about 20 ears. It's like a preview of what they are about to do. A preview gives kids an idea about where they are going. When they get to the point where they need that kind of instruction, they have seen a little bit of it, heard a little bit of it, and thought about it a bit. It will be coming at them from a page that has something on it.

This viewpoint is shared by C.O. in an interview:

> A lot of learning for younger children happens tangentially. They take in what's going on around them, even if it's not directed to them. Many little kids know everybody's business and are very involved in what others are doing.

Students Engage in Play

While teacher-directed, small group instruction was being provided to older or advanced students, that was directed toward an academic product, the younger children had an opportunity to engage in play and to build social relationships.

C.K. described the importance of social development in her class:

> One of our strongest components in our K-1-2 is the social instruction we have going. It amazes me that in any given year, kids that are way out of line with their behavior or that have difficulty with many skills are considered to be a very important part of the class. We all know their strengths and their weaknesses. It's o.k. to be themselves.

During daily instruction, many students were observed to be engaged in play. The choice to play was allowed in every classroom for at least some part of the "instructional" day and varied from class to class.

Matt was wearing a hat from the dress-up corner in C.K.'s room. It covered his head, eyes and ears. Nearby Sara and Jenny were hiding behind a table with hand puppets, making quite a bit of noise, shoving each other's puppet and letting out a high pitched whine each time. Mark and Norman were back in the playhouse with G.I. Joe figures, throwing toothpicks at each other's action figures and making exploding sounds. All this was occurring while C.K. was listening to Beverly read. It took at least ten minutes for Bev to read two pages to the teacher.

* * *

Across the hall in S.W.'s class, Nicki was building with blocks on the floor while the teacher was working with six or seven older children on multiplication tables. Some had flash cards, others had ditto pages. Still two others were working together in a math textbook, copying problems out of the book and discussing their answers. Nicki was within hearing range and occasionally looked up toward the math group, but she slowly placed the large wooden blocks end to end "making a road," she said. Nicki's block play continued for 20 minutes, being briefly joined by Carla who walked on the blocks. Nicki, looking angry, walked over to tell S.W. her troubles with Carla. S.W. suggested that Nicki begin to clean up because it was almost time for the

period to end. Nicki stayed to watch the math group for a few minutes. Then, with another urging from the teacher, she began to pick up the blocks and return them to the rolling cart.

The majority of the time that students spent in multi-age classes was spent in small group organization for instruction. Although the type of student experience varied with the age of the student, the teacher's system of organization and the interest and ability of the students, the instructional day was structured primarily for independent or small group work or play experiences. The classroom instruction focused on cognitive, academic, and affective outcomes. To enhance these outcomes, students were allowed to engage in play activities. In general, students were allowed a relatively high degree of choice and were given the opportunity to move freely. In planning the day, the teachers observed developed a schedule with a lot of movement and change for students. In planning their schedules both J.B. and S.W. agree that between "25 and 35 minutes is the right amount of time for an activity to be scheduled."

Whole Class Instruction

Hill teachers placed an emphasis on the value of small group instruction over whole class, lecture-format teaching. J.B. stated that he used whole class instruction "only to go over rules, introduce a new topic or to do something like a demonstration or science experiment; then, on to small groups or cooperative groups." J.B. continued, "You know that if you go too long in a large group, you're going to short change someone or confuse someone."

There were occasions when the multi-age classroom students gathered together as a whole. The purpose of whole class meetings was generally to review class rules

or routines. S.W. described her use of whole class activities:

> I plan very few whole-class activities. I know I can't teach to the whole group for more than a few minutes without losing somebody. Most of my whole group instruction lasts three minutes or so.

When asked when whole class instruction is used, she described these times as periods to discuss social rules and for class meetings. S.W. described class meetings as times to "problem solve or talk about process and procedures." She went on to describe class meeting times as "housekeeping sessions." Whole class written work was "simply not done," according to S.W.

* * *

Following an announcement over the P.A. system on recess choices for the whole school, S.W. called a class meeting. "Class, let's gather in the rug area," said S.W. The students gathered around, seated on the floor, benches and tables. "I want library," shouted Mark. "I want to go to the gym with Rusty," said Dan. S.W. settled the class by saying, "The more time we spend talking about who goes where, the less time we'll have for choice." She went on to ask who wanted to go to gym, library and outside by having students raise their hands. She then had to select five students out of the ten hands raised that wanted to go to gym. "Who went to gym last time," asked S.W. "We'll let Hal, Beth, Maria, Rusty and Dan go this time. The others will go next time."

This was an example of when a housekeeping, whole group meeting was called. The other reason for whole group meetings was to review classroom rules and procedures.

* * *

When the bell rang to signal the end of a small group period, Dan and Nick began shoving each other. S.W. noted the flare up. She announced to the class, "We all need to come here now." As the students gathered at the rug area, S.W. asked Dan, "What are the rights we have in this class, Dan?" Dan responded, "To be safe." "What would happen," asked S.W., "if you push?" "You could get hurt; he could bump his head, " said Dan. "That's right," said S.W. "In this class, we have the right to be safe." She then dismissed the class to lunch.

Whole group instruction was used to review rules and to determine processes and procedures asked in the class. Whole group instruction was rarely used for student instruction. J.B., a teacher of 4th and 5th graders, described conditions under which he felt it was appropriate to use whole group instruction:

> When I'm conducting a science experiment, something that takes a lot of time to set up, I'll have the whole class watch the experiment.

J.G., a lower elementary age group teacher, described how she used large group meetings for social rather than instructional purposes:

> I use very little large group instruction. The class meetings I've found almost every kid resist . . . they (students) do need to meet, to feel like a group. You need to work on that.

* * *

In her classroom, C.K. used a whole group lesson to provide orientation for an upcoming activity. All 23 students sat on benches or on the rug in front of the teacher's chair. "We are going to the Farmers' Market tomorrow," announced C.K. "What might we see?" Four students shouted out together, "Cookies! Pumpkins! Apples! Ice cream!" "Hands up, please," directed C.K. "Carl, what might we see?"

asked C.K. "Juice or doughnuts," Carl said. C.K. continued, "You're right, Carl. Tomorrow you'll get doughnuts. Wait a minute. Sit down on the floor. I'm meeting your eyes. Sit down and sit still."

The questions continued from the students, "What time will we leave?" "What time will we get back?" "Why not 8:30?" C.K. quieted the group. "Ms. X is here to read us a story," she continued. "When you're ready to sit and listen, we are ready to start." C.K. turned the task of reading a story to the whole group over to Ms. X, and the whole class session continued with a story about foods.

* * *

On another occasion, at 9:30 a.m., C.K. again called a class meeting at the teacher's chair. The students assembled on the rug, and C.K. held up a black piece of construction paper. "In the writing center today, we will be drawing a picture of the scariest thing you saw on Halloween. I want you to use white chalk and draw the picture, then I will be around to help you write a story about it." C.K. drew a picture of a bat with chalk. "What else might be scary?" she asked. Students offered stories, both long and short, about ghosts and what they experienced during the prior night's trick-or-treat experience. C.K. then directed students to the centers. "Who is going to the art center?" she asked. She dismissed students according to their center choices and resumed her spot at the writing center.

C.K. used whole class times to provide instructions on upcoming activities and to provide orientation to new activities. Students also had a whole group story each day when the teacher or a guest read to the class. C.K. also stated that:

> For special activities, like plays, guests, or videos, we meet as a whole class. These are usually enrichment experiences but can also be instructional.

Formal interviews with upper elementary grade teachers revealed that when student groups were older, more whole class sessions were planned. In one section of 4th and 5th graders, R.R. described her time allocation for whole class instruction.

> I use individual about 25 % of the time; small group about 1/2 the time, and whole group about 25% of the time. I teach science in whole group, and we have tests in whole group.

The other instructional periods that utilized primarily large group and whole class instruction formats were in physical education (gym) and music classes. W.L., the music teacher, described his instructional arrangement:

> Everything here is working together. It's all whole group instruction. I have 30 minutes. Everyone is expected to participate, so I need to get everyone involved because of limited time.

With her 3rd and 4th graders, L.B. used a whole class discussion to review the seating arrangement in response to a concern raised by a student. L.B.'s students sat in groups of six around tables in the room. In L.B.'s class, a whole class meeting was held around two of the tables.

Teachers Evaluate Student Progress

Teachers in multi-age classrooms at the elementary level were observed utilizing a variety of methods to assess student progress and evaluate growth. These methods generally included one or more of the following assessment systems, portfolio collection of student work samples, student self reports, and direct teacher administered criterion - reference testing or a direct check of performance based on grade level norms.

* * *

In C.O.'s class, students were observed placing papers into folders in a box on the shelf next to the window. Each folder had a student's name on it and was made out of a folded piece of colored construction paper. When questioned about what the collection was, Jack shared that it was his "work folder" where he put "stuff when he was done." Jack's folder contained two bar graphs done on graph paper with colored pencil; three drawings; four writing assignments (some with drawings); a math paper with subtraction problems written on the page; a number line (about 3 feet long); and two envelopes with cut-out pieces of paper in them. Jack described the latter as "puzzles."

There were about 20 other folders in the box, too, each with papers inside. In Julie's "work folder" was a paper titled "Self Report." Julie explained that she had to fill it out with C.O.

When asked how he evaluates progress, C.O. explained the process of student self reports, "Once every two weeks, we do student self reports that list: things I'm really good at, things I'm doing now, and things I want to learn."

C.O. explained that each student kept a folder and a portfolio with self reports and completed work inside. He explained how he used the folder and portfolio at parent-teacher conferences to illustrate student progress. According to C.O., "You take out samples of writing from a previous year or the beginning of the year and put them side by side. You can see the growth."

C.O. reported that he utilized no normative data to plan instruction or evaluate student learning. He "avoids comparisons" of students with each other or with other classes.

* * *

Utilizing a combination of student "portfolio" and criterion reference testing, S.W. checked for understanding with each child individually and then selected activities to enhance growth in specific skill areas for each child.

At 4:30 in the afternoon, S.W. was busy preparing work folders for students for the next day. She had gathered the students' daily work from their "mail slots" and reviewed each paper for accuracy and completeness. She would then staple together the work packet, put it in a pile on the nearby teacher's desk, and insert new assignments into the work folders. Sometimes, she put in ditto pages, other times she wrote page numbers on a piece of paper and inserted it into the folder. Each of the 24 mail slots received the same going over at "least once a week," according to S.W. She explained that most completed work was sent home but that certain samples were kept in a portfolio for parent conferences. She explains:

> These may be a special work of art or an especially creative piece. It also keeps math samples and story samples that are illustrative of where a child is working.

* * *

In addition to a portfolio collection, S.W. also utilized teacher-made tests with small groups or individuals to assess progress in skill areas, such as language arts or mathematics.

S.W. asked Polly and Daisy to join her at the work table. "I want you to read this story to me," she said to Polly. Polly began to read a trade book, Dinny the Dinosaur, described on the front as "A first start easy reader." "Once there was a dinosaur," began S.W. Polly followed, "Dinny was his name. He lives in a town." Polly continued for a few pages. "Now, it's your turn, Daisy," said S.W. Daisy began

to read. S.W. had to fill in some words as they read along.

* * *

During math period, Randy and Jim, two older boys in S.W.'s class, were each given a math textbook. "I want you to do problems 1-5 on page 32. Then, see me," directed S.W. The boys worked alone on the story problems. They occasionally questioned S.W. about a problem. The teacher would, every 10 minutes or so, check with each boy and discuss their answers. Randy completed the problems first and waited patiently, book in hand, as S.W. completed a conversation with an adult by the doorway. She then collected his paper with the answers and asked for the paper with his work on it. She quickly reviewed the answers with him, praised his efforts, and placed his paper on the teacher's desk.

S.W. explained how she used normative materials as well as teacher-made testing to assess student progress:

> I keep around certain types of materials that I use to place the child's level. If I want to know how well a child is doing with regrouping, I'll find a page in some 4th grade math book and say, "Let me see how well you can do this."

In an interview with L.B., a 3/4th teacher, she described a method she used to determine normative progress:

> If you want to see how well kids are doing, I'll get out a little paperback book that's marked with an approximate grade level on it and I'll say, "You read some to me to see how well you are doing." If they ask why, I'll tell them it's a grade level assessment.

The principal, P.O., stated that she was unconcerned with "normative benchmarks or standardized test results" at the elementary grades because of what she calls "foundation learning." P.O. explained:

> When you teach from a language experience approach base, the reading, language and writing are all interactive and come from the kid's own knowledge base . . . it takes longer [to develop skills] with foundation learning.

P.O. went on to describe symbolically how foundation learning, using student experience and choice to build a base of knowledge, eventually yields the desired learning outcomes:

> I think of it like a pyramid. We take 20 learning blocks and lay them out in a row to build a base. In other schools, they may put the skills blocks one on top of the other and make a tall tower. Initially this pile will be taller, but in the long run, our approach is stabler and will get just as tall.

The result of a varied individual approach to student evaluation and assessment was a reduction in comparison of one student to another, resulting in less competition, according to C.K. She described the advantages of individually assessed progress systems:

> Kids often feel badly (sic) when they are not doing certain things at a time they are told they should be doing it. They feel defeated. Some kids learn things at 5th grade that others learn in 3rd. We need to tell them it's o.k.

Individual assessment, using portfolio, criterion testing, and student self report methods, rather than whole class grading and testing, resulted in students that have "better self concepts" because they experienced less failure and grade retention, according to R.Z.

Although normative testing was done in the fall of 1990 in grade 4, utilizing the Michigan Assessment Test (MEAP) in the areas of language arts, math and science, there was no evidence observed or recorded in interviews that indicated how

the test results were utilized or if the information was shared with parents. No evidence of the use of standardized achievement testing was found. S.W. explained that standardized achievement testing was not utilized at Hill School to measure progress.

> We try to avoid comparisons. Each student is different and progresses differently. There is little point in comparing students in my class to national norms.

The use of standardized testing for student achievement assessment, student group information, and student instructional planning was not evident in the multi-age classes at Hill School.

Participant Attitudes, Perceptions and Beliefs

Considerable data were gathered and analyzed that dealt with the attitudes, perceptions, and beliefs that participants held about the practice of multi-age grouping.

In the fourth section of this chapter, these data will be reported and patterns of participant response reviewed. The data for this section were gather primarily through participant interview and document analysis.

This chapter section is organized into subsections that were determined through an analysis of the data. Most of the data for this section was obtained through formal interview or written journal analysis.

The subsections for reporting data on participant attitudes, beliefs, and perceptions about multi-age practice include: Accommodation of Individual Differences, Multiple Years with the Same Teacher, Personal Reflections, and Faculty Planning and Interaction.

The educational concepts described here are embedded in the perceptions of

the participants in the multi-age classes observed. Experienced multi-age group teachers were asked to report their beliefs, attitudes and understandings about multi-age grouping. In interviews with teachers, a pattern of stated beliefs emerged that served as the rationale for multi-age grouping. These fundamental concepts were considered when forming classroom groups, planning instructional schedules, and placing individual students in classrooms.

Accommodation of Individual Differences

The first premise that was consistently reported by teachers was that multi-age grouping was utilized to accommodate individual differences. Teachers consistently stated the belief that students learn at different rates and in different ways. The philosophy expressed by staff included a desire to look at each individual child and take into consideration each child's development in terms of social maturity, each child's makeup in terms of learning style, and each child's achievement level. Although each teacher placed emphasis on different aspects of an individual development or makeup, there was a pattern of responses that indicated that experienced teachers in this multi-age setting believe that multi-age grouping enabled them to meet the needs of individuals and accommodate individual differences. During interviews with teachers at Hill School, eleven of the subjects stated that multi-age grouping enabled them to meet individual student needs (see Table 3).

Table 3 Reasons for Utilizing Multi-Age Grouping
(in order of frequency of response)

Multi-Age Grouping	No. of Teachers Giving Response (N = 13)	% of Teachers Giving Response
Enables teachers to meet individual differences	11	84.6
Enables teachers to use student-to-student helping strategies	10	76.9
Is developmentally appropriate	10	76.9
Results in better academic outcomes for students	7	53.8
Enables teacher to know students better/ more than one year with same teacher	7	53.8
Eliminates/reduces student failure (grade retentions)	7	53.8
Give students choice	6	46.1
Is a more natural/comfortable classroom environment	6	46.1
Enables teachers to put learning styles information into practice	4	30.8
Results in better academic outcomes for students	2	15.4
Enables teacher to give more individual attention	2	15.4
Results in less stress for teachers	1	.8
Results in less work for teachers	1	.8
Provides for more time on task	1	.8

The majority of teachers at Hill School stated that the benefits of multi-age grouping included a forced recognition of individual differences in their students and a realization that children grow and develop at different rates. This comment by J.B. was characteristic of the responses obtained:

> In any class, in any grade, you have a range of student abilities. By having more than one grade together, you have to accept the fact that there is a range. You can't hide behind the idea that all students at the same grade level have the same learning needs.

The principal, P.O., echoed this belief:

> One of the assumptions of a single-age group is that children should come to the same understandings within the period of one year. While there may be an average, normal is a very wide spread. In multi-age settings, you can proceed at your own pace.

In this multi-age setting, not all students were expected to develop skills at the same rate at the same time. Teachers reported having "flexible expectations" for student achievement. In an interview with P.O., she stated that:

> Academically, in a mixed-age group, you're more easily able to meet the needs of the peaks and valleys type of kid. You may have a child that reads at the 12th grade level but does math at the 3rd grade level, and that's alright. You're not failing at one point and excelling at another. You just happen to be working here in one activity and there at another.

In a primary-level classroom, C.K. explained how students "spurt" in certain areas of learning:

> In a K-1-2, a surge in reading might occur, but the child is still wetting his/her pants or can't cut. It's o.k. to develop differently. We enjoy the differences in each other.

Expanding on the theme of valuing diversity, C.O. explained his belief about

how multi-age grouping helped people accept differences in growth and development, not just in children, but in all age groups:

> With an mixed group, you get the development of a lot more respect for different people, different ages. One of the problems with our society is that we show very little respect for older people and younger people. If we had a broader mix growing up in school together, they would learn to respect each other, whether they were the same age or not.

P.O. described her experiences with what happened when students of the same age were placed together:

> Students who are all expected to be of the same age in the same grade assume that they are all going to need to learn the same thing at the same time, so there is a lot of competition.

She went on to describe the practice at Hill School.

> Students are given assignments without regard to grade level curriculum. If they need to wait another year in a 1-2-3, they can wait; they can grow.

In an informal interview with Bobby, a six-year-old, he was asked what grade he was in. "I'm in kindergarten," stated Bobby. "I'm not ready, so I can have an extra year in kindergarten and child care." When asked how he felt about his extra year, Bobby replied, "It's great. I can have C.O. for more years. I like choice time."

Multiple Years with the Same Teacher

The practice, in multi-age classrooms, of each child having the same teacher for more than one year was of importance to the majority of the teachers. Spending multiple years in the same classroom yielded many advantages, according to the Hill faculty. L.B. described in her writings how the multiple year relationships with students have affected her teaching career:

> Having half of my class returning each year is a comfortable feeling for me. I'm uneasy when I have new kids. I always hope they will like me.

Academically, there were advantages of having students spend multiple years with the same teacher in multi-age classes, according to S.W., L.B., C.K., and the principal. Since teachers already know many of the students, their abilities, their learning styles, their families, and their interests, teachers were better able to help returning students get right into their instructional program at the beginning of the year. The staff reported that more time was available for learning and less teacher time was spent on orientation, review and assessment. They also had at least half and up to two-thirds of their class returning each year so there were always students who were familiar with the routines and who could help others. The opportunity to change roles for a child in a multi-age class was an element of the organizational pattern that was valued. Teachers also mentioned the social benefits of multiple years spent with the same teacher and fellow students. Friendships were already established and students, as well as teachers, reported that they felt more comfortable as they enter into a new school year.

In an interview with S.W., she reported on the advantages of students spending multiple years in the same classroom.

> Academically, the multi-age class advantages are that you already know the majority of the [returning] students; their style. You already know what they were interested in the year before, and you already know the kinds of materials they are ready for, so you don't have to do a lot of assessment. So for me, it's a real advantage to have kids for at least two years.

P.O outlined the social benefits for students that being with the same teacher for multiple years could produce:

> Socially, over a period of years, students in a multi-age group have an opportunity to be the leaders in the class. In earlier years, they have the experience of being nurtured.

J.G.'s experience has convinced her that students benefit from having the same teacher for more than one year:

> Having kids for two years is a big advantage. The 1st graders have role models in the class. The kids that are returning come back with a sense of confidence: I know the room; I know the teacher; I'm going to be o.k.

C.O. and C.K. also had successful experiences with multi-year enrollees. Their experiences convinced them that one year was not enough time to get to know a student. In an interview, C.K. expressed the belief that:

> Because I'm having kids for the third year . . . I can see growth real clearly. I'm better able to see progress than with just one year's growth.

C.O. would find it hard to operate on a one-year rotation. "One year isn't long enough to have a kid," C.O. reported. "By the time you figure them out, it's three or four months into the year." S.W. also tried to keep each student for two or more years. "It give my students an opportunity to be a role model, to have skills, to really develop relationships," reported S.W.

The concept of students spending multiple years with one teacher was strongly supported by the staff and students at Hill School. Suggesting otherwise evoked intense emotional responses. J.G. expressed a strong belief that it is important for teachers to have students for more than one year. J.G. had such a firm commitment to this multi-year arrangement that she stated that she would "retire" if she could only have students in her class for one year. C.O. went so far as to state that spending more than one year in the same class with the same teacher is "good for all students

in all schools," not just in alternative settings.

The staff gave numerous reasons for having multi-year student placements with the same teacher. Their rationale was based on ideas that when teachers had students in their classes for more than one year, it increased their ability to see and measure growth. The practice also enabled them to get to know the students' learning styles, abilities and interests. The staff also cited the social benefits of growing into roles, continuing established friendships and feeling comfortable and confident. Still others viewed multiple year classroom enrollment as increasing time on task and lessening competition and failure created by grade level expectations, promotion and grade retention.

Personal Reflections of Teachers

Many of the teachers cited personal reasons for their commitment to the practice of multi-age grouping. A number of teachers at Hill expressed frustration with their own school experiences or those of their children as reasons for teaching in a multi-age alternative setting. Still others described positive prior life experiences related to their schooling or the schooling of their children as reasons for their involvement. In either case, the rationale given for pursuing a career path in multi-age classroom teaching was generally intensely personal. When posed with the question, "Why did you choose to teach in a multi-age grouped classroom?" C.O. described his life experiences in a journal entry:

> Working for 10 years with a mixed-age range of people taught me that there is something to be learned from people of all ages. Everyone worked together regardless of their age and in a good working situation, everyone is valued. Schools need to be the same way.

O.K. described her life experience that led her to Hill School:

> I had my child in a multi-age program. I didn't know that much about it. Right away my daughter started learning things because of the help of other students. It was remarkable. In 1st grade she learned to tie her shoes because a 3rd grader took time to do it with her for about two weeks.

Following her daughter's experience, O.K. obtained a teaching degree and became "committed to maintaining" a multi-age alternative.

Like L.L., C.K. came out of the cooperative nursery school movement. Experiences in a community volunteer setting led these teachers into alternative multi-age teaching. C.K. explained:

> We get lots of parents and teachers who come here out of the cooperative nursery movement. They are very involved with the children and co-ops.....teach people to accept differences.

P.O. described the faculty as ". . . generally older, more experienced teachers who are global learners . . . many who didn't do well in the traditional system."

"In my own education, I felt like a vessel with information poured into me," states C.O. "It was very unfulfilling."

"I had no responsibility for my own learning," states J.B. "I don't want kids to be treated like that."

Others like S.E. came to Hill because they had a positive experience in a multi-age setting in their school background. "I went to school in a one-room schoolhouse with 60 kids. It was a really nice experience with a great sense of community."

C.O. learned a lot working with a broad age group. "Some of my best friends are 20 years older than I am." C.O. expressed his own beliefs about the grading of schools as he reflected on his own life experience. "Age doesn't matter," said C.O.

"When I worked construction, I learned from 20-year-olds and 60-year-olds." C.O. would like to have a larger age span represented in his class:

> I'd like a bigger spread . . . a good mix like K-5. The older kids would be a lot more helpful, but we separate out the ages. I don't understand why.

Experiences with "real life" prompted teachers to gravitate toward multi-age grouping as their preferred method of practice. The idea that multi-age grouping was a reflection of her real world experience was expressed by P.O.:

> Schools are the only artificial age-grouped place in our lives. When students go home, they don't play with just six-year-olds or just seven-year-olds. You play with a wide variety of all ages.

The reasons for the involvement of individual teachers in multi-age classrooms were intensely personal. Many of the teachers expressed concern about their traditional school experience. There was also a level of frustration with the discrepancy between school structure and the structure of the adult world as a whole. Personal reflections revealed strong statements about the value of multi-age group practices. A strong commitment to the practice was clearly present at Hill School.

Faculty Planning and Interaction

Data collected from interviews and site observations provided evidence that multi-age grouping as practiced at Hill School created the need for the staff to work closely together. Consistent staff communication and cooperation was necessary to facilitate the instructional practices utilized in the multi-age group setting. In order to make student-helping-student strategies effective, teachers needed to discuss student needs and class schedules.

To promote choice in activities and to enable student freedom of movement

around the building, the staff needed to discuss expectations for student conduct, mobility, and expression. The possibilities for confusing students with mixed expectations was increased in a multi-age system when student movement and choice was so pronounced.

Teachers spend numerous hours in cooperative planning at Hill. Teachers shared classroom spaces and hallway space for instruction. Every class was involved in at least one scheduled activity with another classroom group on a daily basis. Staff meetings at Hill were held once a week and various subcommittees of teachers were responsible for school operations and other communication issues.

Hill School staff utilized a school improvement process. The values, expectations, and beliefs of staff members were discussed in this format. Staff meetings were times when school improvement goals were discussed by the faculty. Teachers also had meetings to discuss student transitions from one classroom to another. The teachers cooperatively developed the classroom groups.

With the need for interdependence and good communication comes an increased need for understanding and mutual support. Many staff members at Hill expressed the presence of a supportive atmosphere as essential for their instructional effectiveness.

Staff members consistently reported that they kept teaching at Hill because of the supportive atmosphere. R.Z. expressed her view that:

> At Hill the people who are here want to be here, so there is more caring about the kids. We don't give up on kids like some other schools do.

S.E. shared a similar observation:

> Everyone is here because they want to be here.

It's not just a job. It's like a family. They really care.

P.O. described the collegial atmosphere that attracted teachers to Hill:

> Multi-age teachers need a lot of respect and cooperation. The people here are sensitive and care about the students. We must work together.

But, with increased interdependence comes increased conflict. "That's why I hire people with more experience, more maturity," reported P.O. Some teachers did feel the stress of this interdependence as R.Z. reported:

> When we do things together, the lower elementary teachers view the upper grade teachers as not having enough choice for students.

This need to communicate to reduce conflict was illustrated by O.K.'s comment:

> When you share students, you need to talk to your fellow teachers about their schedules, rules and ways you can help each other. I usually work with teachers nearby so I can drop over and ask questions. Sharing can get confusing.

S.W. sometimes wondered if all of her students were accounted for:

> I started team teaching with J.B. because I wanted to be sure that our experiences were coordinated and meaningful. It's not enough just to release students into another classroom.

S.W. and J.B. plan a book discussion group, reading partners, and team up for science and social studies units. This team teaching was encouraged by P.O.:

> Teachers are too isolated. When they work together they build a stronger program. There just doesn't seem to be enough time to learn good teaming skills.

The concern about time for planning, communication, and sharing was a concern expressed by staff, but was also viewed as necessary for effective functioning.

The degree of structure and choice varied within the classroom groupings. As W.L. put it:

> There are some teachers that are more structured than others, some who give more choice. To get along here, you have to be flexible.

Strangers to Hill School, like substitute teachers, were frequently unaccustomed to the lack of structure, lack of rules for hallway behavior, and were concerned about the noise level.

* * *

A straight line of students left the art room. Not a sound was made as they headed up the stairs single file. A stern looking teacher followed the group. R.Z. commented to the principal, "It looks like we have the (substitute) art teacher from Hell again." Breaking the traditional ideas about proper student behavior was difficult, according to the staff. It takes people time to adjust to the atmosphere at Hill. Just as R.Z. made a joke out of the behavior of the substitute, others on the staff find it difficult to question the rules of fellow staff members. "It's not always easy to teach here," reported one teacher. "Sometimes you have to bite your tongue."

The need to communicate, tolerate, cooperate, and plan jointly is high at Hill School. Staff found that consistent meeting time was necessary to make the multi-age system work. Interdependence for staff, like interdependence for students, was a lot of work and demanded mutual respect, professionalism, and a firm belief in the concept of multi-age grouping.

Issues of Concern to Participants

Contained in the fifth section of this chapter, are data that participants provided about the problem issues and pragmatic difficulties with multi-age group

practice.

The teachers at Hill School identified a number of concerns related to the perception of others about multi-age grouping as a practice. These concerns included a lack of common terminology and a lack of understanding of the practice and its underlying concepts by parents, educators, and the community at large. In addition to concerns about public perceptions, the staff at Hill also reported more pragmatic concerns about multi-age grouping. Seven of the teachers interviewed reported practical problems with implementing multi-age practice (see Table 4). These problems included difficulties obtaining materials, problems associated with reporting pupil progress, and difficulty with planning for instruction.

Table 4 Problems Identified with Multi-Age Grouping

	No. of Teachers Giving Response (N = 13)	% of Teachers Giving Response
No problems reported	6	46.1
Problems with:		
obtaining needed materials	4	30.8
being recognized as acceptable practice by other educators	2	15.4
acceptance by parents/community	2	15.4
making more work for teachers	2	15.4
having too wide a range of abilities	1	.8
doing whole group instruction	1	.8
explaining progress to parents	1	.8

Definition of Multi-Age Practice

Teachers expressed concern over the lack of common terminology, writing, and support for multi-age grouping. The lack of a consistent understanding and definition of the practice has led to difficulty with acceptance of multi-age grouping as a legitimate educational practice.

J.G. pointed to the work of Featherstone and Barth as "rallying points" in the 1960s and 1970s. She does not see any leadership now being exerted by scholars to expand the practice of multi-age grouping. J.G. stated that:

> We are here because of parents. It was a reaction to the extreme rigidity by which the schools were being run. Hill School has come to be an alternative. The professional education community does little to maintain or promote our existence.

Indeed, there was little common language in use by the faculty at Hill School (see Table 5). The practice of multi-age grouping was described by many different terms, even among the staff members in the building. P.O., the principal, preferred to use the term multi-age grouping. She stated, "I like multi-age because age only speaks to chronological age, not academic ability." R.Z. and O.K. also preferred to use the term multi-age. According to P.O., "If I had my choice this school would be multi-age and non-graded."

However, seven of the staff members interviewed, the majority of the faculty surveyed, identified the term family grouping as the preferred descriptor for the age/grade arrangements in the school. L.B. preferred the term family grouping because students "grow into" multi-age classes. "Their roles change, like in a family," according to C.O. S.W. uses the term family grouping because of the "supportive

Table 5 Terms to Describe Age/Grade Patterns

	No. of Teachers Giving Response (N = 13)	% of Teachers Giving Response
Family grouping	8	53.8
Multi-age grouping	3	21.8
Multi-grade grouping	2	15.4

social structure where kids learn from each other and help each other," as in a family. The tendency to shy away from grade comparisons made family grouping an appealing term for J.G. She described the school as "one large community where people of different ages can learn together."

Two staff members utilized the term multi-grade grouping to describe their class arrangement. C.K. stated that "I usually say K-1-2 because I don't know the right word, but I never call it a "split." W.L. also used the multi-grade terminology. "I'd call it a mixed grade level, like S.W.'s class is a 1-2-3."

P.O. planned to identify common language to describe the class configuration. She proposed an alternative to using the existing terminology at Hill:

> I'd rather call it a lower, middle or upper elementary class. It's easier to deal with kids as individuals when you don't use age or grade labels.

The lack of consistent terminology within the school specifically and within the community at large was a concern for staff. Some teachers felt there was little leadership being exerted on the local or national level to promote an understanding and acceptance of this practice. Teachers reported that this lack of common

definition makes communication difficult and may be creating a barrier to open dialogue of the practice within the field of education.

Public Concern

There was a pattern of faculty concern over misconceptions about multi-age grouping. Teachers at Hill found it difficult to communicate the expectations for students to their parents. There were also misconceptions about the age/grade grouping practice that affect the way that parents and community groups perceive the classroom operation at Hill. C.K. shared her perception that "at this point, it [multi-age grouping] isn't something that parents understand. She elaborated on her concern about parent perceptions:

> Parents who have a 3rd grader always want them in the 3-4 because they think that the instruction will be higher. You have to be real smart in your explanation about multi-aging.

L.B. described her concerns about how the parent community became frightened by educational alternatives as a result of public policy.

> Why does everyone have to have the same textbook? If everyone of the same age has to be on the same page in the same textbook as a measure of success, this is a real problem.

R.Z. stated some frustration with the way that parents view multi-age grouping:

> Society mirrors the school image. In order to be a cub scout, you have to be in 1st grade. Sunday School is set up in grades. The concept of grades and everyone of a certain age being in a certain grade and learning things is a central theme in the way our society is organized.

Still other teachers believed this societal expectation was artificial and transparent. "Magically, once you get out of high school," said P.O. sarcastically,

"whether you're 50 or 18, you can all do, learn, and enjoy the same things."

L.B. described how public education policy makers frighten parents:

> These are the people who frighten parents. The ideas come from guys like [William] Bennett, who talk like they know about what educators need to do. These are people who are not in classrooms, who don't know what children's responses are to these ideas.

As a result of the information barrage about what students can't do, according to C.O., parents are suspicious of alternatives and are afraid. C.O. described a community of education consumers that "want it all."

> So people want the traditional prescribed curriculum and, at the same time, they want creative, flexible experiences for their children in multi-age groups. They want us to do it all. This attitude, these fears, have curtailed the spread of multi-age classes.

Not only are there fears among parents, educators also have significant mis-perceptions of multi-age group teaching, according to teachers at Hill. The teachers interviewed displayed a pattern of concern about the lack of accurate information that was available to educators in the community and in the nation. "The perception is out that teachers can't use whole-group instruction with mixed-age spreads," according to C.O. "Teachers believe only self-directed kids should be in multi-age classes," stated J.G. Other concerns were also raised about how teachers, outside of Hill, perceived the program. P.O. described a major concern among the staff at Hill:

> We are concerned . . . teachers have traditionally been brought up to believe that if you have two grade levels in your room, you must have two curriculums. You'd teach 2nd grade one curriculum, one lesson, and teach 3rd grade another lesson at the same time. When teachers were expected to teach separate curriculums in the same class, it was an extra load.

The teachers at Hill feared that this grade level curriculum expectation in

multi-age classes was still a barrier to acceptance of the practice. "In some places, they even pay teachers extra to teach splits," added J.G. J.G. believed that there is a lack of information, research and scholarship, and that fears of alternatives, as well as poor communication, have limited choice in program design:

> We have lost our leaders in alternative schools. Multi-age classrooms are seen as one of the evils of the 60s. People need to put work into change. The people who had deeply rooted beliefs in this type of education kept up, but for others, there are no models, no scholars like we had with informal schools.

L.L. expressed her frustration:

> We have to conform to a structure outside of this school. Society values paper/pencil stuff and reading. In 4th grade, it's no longer o.k. to do inventive spelling.

O.K. echoed concerns about parent expectations for achievement being in conflict with what multi-age grouping was trying to accomplish:

> There is a perception that it is a waste of time for older children to spend time with younger children, practically being their tutors. The notion that it [multi-age grouping] is detrimental to olders is based on the fears that younger children are taking away time from the education of others.

Given all of the concerns about a lack of needed information about successful multi-age grouping practice, parent fears, conflicts with community expectations, and pressures to conform to grade level curriculum design, there are legitimate reasons for teachers to be concerned about public perceptions of multi-age classes. Yet teachers at Hill expressed strong personal commitments toward the practice.

More Work for Teachers

A pattern emerged that indicates that the upper elementary teachers at Hill School saw multi-age grouping as more work for teachers, while the teachers in the

lower elementary grades viewed multi-age grouping as the same amount of work or less work than single age/graded classes.

As an upper elementary teacher, L.L. reported that:

> Multi-age grouping is a lot of wear and tear on the teacher. There are times when I have a rough day that I say if I were in a straight 4th grade I wouldn't have to do all this planning.

P.O., the principal, believed that teaching a multi-age section is more work, regardless of the grade level:

> Absolutely . . . multi-age grouping is more work for teachers. A couple of reasons . . . one is that the school district has not adequately been able to equip classrooms with appropriate hands-on materials, so all of us make do. If you're teaching a wide spread of ages, you're more likely to need a wide spread of materials. You need more things at the child's interest and reading level available. It's not enough that the kit be downtown.

L.B. elaborated on another reason that multi-age grouping may be viewed as more work for teachers:

> If you see it [multi-age grouping] as a burden, then you can find a lot of problems with it; especially if you think that everyone has to learn the same things at certain ages in order to do well. With a more traditional idea it becomes harder to accomplish it with multi-age grouping.

A lower elementary teacher, J.G., described her view of why teachers perceive multi-age grouping as more work:

> There are so many more advantages that it's difficult for me to focus on the disadvantages. But, not enough teachers know about the advantages, so people are afraid and concerned. For me it's less work because students help each other learn, freeing me up to help those that need it. If it's a school where everyone has to have the same textbooks and workbooks, and if teachers

> weren't given the flexibility to meet goals in other ways, then I think multi-age grouping would be very difficult to do.

Under the predominant paradigm, that students of the same age have the same needs for learning and that most everyone in a single grade level should be able to learn the same material at the same rate at the same time, multi-age grouping would constitute a burden for teachers according to many of the staff at Hill. The central office-prepared expectations for curriculum planning by grade level, the use of standardized skill testing using grade norms, the organization of commercially produced instructional materials by grade level, the lack of common language, and the lack of published information on multi-age classes are all factors that serve as barriers to the increased use of multi-age grouping and are factors that contribute to the fact, or at least the perception on the part of some teachers, that multi-age grouping is more work.

There is indication, however, that some of these factors may be changing. An interview with the principal at Hill included a hint of promise:

> The commercial materials that are available are written with a different viewpoint. Just now open-ended kinds of materials in science and math, like "Math Their Way," are coming out so you can buy them. Most people have had to make all things from scratch.

L.B. was also seeing evidence of changes in materials in all elementary settings:

> More teachers are using trade books rather than basals. Experience stories and inventive spelling are replacing workbooks. Things are getting better.

However, the feeling of frustration about the lack of commercially available materials was common place at Hill. "It's hard to have the wide spread of materials available to meet different needs," stated C.K. "Teachers need to plan more lessons,"

according to S.W., "and you have to locate more materials." "I spend my evenings making materials," reported O.K.

S.E., the school secretary, sees all the teachers trying to locate appropriate materials:

> They don't use a lot of textbooks, so they have to look for more materials. But, the teachers are more creative here. They have to be.

The pattern of setting curriculum expectations by the traditional centralized method has an affect on practice at Hill. In the central office administrative system, there are curriculum directors and instructional specialists who are put in charge of course content and outcome designs as a system-wide activity. J.G. described how this lack of control on the classroom level interfered with multi-age grouping:

> Teacher opinions about curriculum are not valued. The administration imposes a reading management program; everyone was suppose to follow it. There were no options. There is still conflict with the district-level curriculum expectations, even though they recognize us as "different."

J.B. concurred that the district-level curriculum system impaired his ability to teach in a multi-age group:

> We went to a centralized way of doing things where you have a lot of specialists telling you what to do. Multi-age classrooms are allowed under a centralized system to the extent that they are convenient. We are tolerated, but not valued.

P.O. shared a similar concern:

> District systems like reading management make it really difficult to multi-age because in some cases the district requires students to use the grade level standards for records.

The curriculum documents created the need for creative alternatives to the

grade level content coverage. For content area instruction, like science or social studies, the two upper elementary grade level section teachers utilized a two-year rotation system, where, for example, the 4th grade curriculum is utilized one year and the 5th grade curriculum is used the next year. This pattern contributed to the belief by the upper elementary teachers that multi-age grouping was more work. J.B. stated his belief that

> By having a two-year rotation in science and social studies, there are certain things that are consistent each year and certain things that are changed each year. It's harder to get organized, harder to plan than in a straight grade.

R.Z., a 4-5 teacher, had a similar belief:

> You can't be on a one-year content rotation since you have a kid more than one year. You always have to be thinking of new ways to present the same concept.

L.L., the other upper elementary teacher, described how she organized her curriculum content:

> Curriculum is on a two- or three-year rotation. Years that begin with an even year - I do the even-year grade curriculum. For example, 1990 is grade four curriculum. On odd number years, I do the odd grade level content (5th grade). That way I don't have trouble remembering what I've covered. There is more planning involved though.

The pattern of what lower and middle elementary teachers stated as their beliefs about the importance of specific content instruction did not parallel the belief statements of the teachers in the 4th and 5th grade classes at Hill. The majority of these lower grade level teachers described a less structured system and less concern with covering each district prescribed objective. S.W. described the approach to curriculum planning used by the lower elementary staff:

> We don't try to teach the same units the district recommends. We use an inquiry approach. Our goal is to develop students' interests and to give them a taste of knowledge in geography, social studies, and science. We put the focus on developing within students the skills necessary to find out more.

L.B. focused on helping students make choices. "I let students make their own choices about what to learn and help guide their search." C.O. saw his role as a facilitator rather than as a director of learning:

> In multi-age classrooms, we don't look at kids as empty vessels, pouring in the information. Reading, writing, and language are all interactive and come from the kids' own knowledge base.

C.O. explained:

> Because students help each other more, it's really less work for me. Students make good choices. They have many helpers.

Because learning experiences in the early elementary grades at Hill are based on building on a child's interest and past experience, there was less emphasis on covering certain pre-described district content objectives in math, science or social studies. J.G. described her curriculum planning style:

> When I can do what I want, I work around a general theme, like nature or machines, and have different reading and math experiences grow out of that theme. I'd like to have more choices, computer access, and learning stations.

S.W. had a similar pattern in developing learning opportunities. "I organize my assignments very open ended." There are many different ways to learn and things to learn.

The lack of grade level content structure in the early elementary grades created a good fit with multi-age grouping. Students were able to pursue their own

interest, work at their own pace, and move to different work areas or centers. For the upper elementary grade teachers, who put more emphasis on teaching the prescribed district grade level curriculum, more concerns about the practice of multi-age grouping were expressed. R.Z. described her concern with a wide variety of ages together:

> Sometimes the range of skills is so wide in multi-age groups that I feel like I might be losing the bottom kids and the top kids.

L.L., a 4-5 teacher, expressed a similar frustration:

> When you teach the district curriculum, you teach more whole groups and it's hard to get your point across. The olders get bored and the youngers get confused.

Whatever classroom system was used, formal or informal, structural or unstructured, there was a common belief among the staff at Hill that students are capable of making choices and that the role of the teacher was one of mentor, counselor and resource person. The concern was expressed that the traditional role of the teacher as the giver of knowledge must change for multi-age grouping to be viable. The fear was that this new role for teachers may be viewed as more work or at least less control.

J.G. explained in a journal entry:

> Teachers need to act as mentors. Students are like sponges soaking up knowledge. Teachers need to let them soak up knowledge and facilitate their ability to seek out information. We must recognize that students are very capable learners without us. The goal is to develop a learner that takes responsibility for their own education.

This view was also reflected by the principal, P.O.:

> I expect to see kids making choices. The role of the teacher must change.

C.O. echoed a similar theme:

> Teachers are afraid to give students power over their own education. We must realize that we are not the sole givers of knowledge. If we trust the students, they will make wise choices about their own education.

In a teacher interview with S.W., I asked her how she planned the instructional day to meet the needs of students of varied ages and abilities so that they learned best. S.W. described the ideal classroom operating:

> In the rare moments when this classroom runs as I want it to run, there are many options or choices for learning independently or with a friend, and students can seek out and get what they need for where they are at. That just can't happen with teachers talk...the whole-class lecture method.

Some teachers at Hill School described multi-age grouping as more work. Others worry that the change in the role of the teacher, from the giver of knowledge to a mentor and counselor, would be viewed as more work by the profession. In either case, there is an awareness that in general the education professional viewed multi-age classrooms as more difficult to teach than single-age/graded classes.

There are some practical problems with multi-age grouping. A central problem related to the difficulty in locating the varied instructional materials needed and the lack of flexible, commercially-prepared materials. Another practical problem was created by central curriculum demands that are organized by grade level. Trying to meet the grade level curriculum standards while implementing multi-age grouping was viewed as quite difficult by all the teachers. Many of the teachers, particularly at the lower grade levels, ignored the prescribed district standards when planning

curriculum content. This issue was of greater concern to the teachers of 4th and 5th grades at Hill and may account for the reason that upper grade staff tended to view multi-age teaching as more work than single grade teaching.

Noise

A final pattern that teachers described that characterizes a multi-age class was the tendency for these classrooms to be noisy. Due to the large number and variety of simultaneous activities occurring in a classroom, and the freedom of choice that was often provided for students to move about, interact, and converse, the activity level and accompanying noise level were frequently high. C.O. stated it simply, "Many teachers can't tolerate kids moving, making noise, and being really active." The school secretary described the classrooms as "noisy and messy." In a conversation with C.O., he apologized for the noise, "I hope you can understand the order underneath all this confusion. It is hard to concentrate with all the noise."

Noise and activity became a problem "only when it interferes with the learning of others," reported C.K. "You get used to it."

There was a pattern exposed where teachers found it necessary to explain to the visitor why the noise level was so high. When entering C.K.'s room, she explained to a student volunteer that "the centers get pretty loud, but that's alright." J.G. explained that "It's easy to think with the noise for kids, but hard to get their attention." Upon entering C.O.'s room, he told a visitor, "If it gets too loud, then I'll turn off the lights or something to quiet it down a bit, but I'm more concerned when there is no noise . . . no noise means no learning." "Some kids get distracted," reported S.W., "but they can go to the hall or library or quiet area."

The high level of noise and activity was characteristic of multi-age classes at

Hill. Teachers felt a need to explain the noise level. They expressed concern about the way visitors responded to the noise level, but did not express concern about the noise level interfering with learning. "A noisy class means students are busy," said the principal. "It's a good sign."

Summary

This chapter has dealt with the reporting and analysis of the data collected to carry out the objectives of the study. In this chapter section, the important findings are highlighted and the results of the data collection process are reported.

Although small group instruction was utilized in many single-age/grade classrooms, the reliance on this form of classroom instructional grouping dominated the multi-age classroom structure. The use of this grouping method stemmed from the realization of teachers in multi-age settings that all students learn differently, learn at different rates, and need to learn in a socially comfortable atmosphere. Comfortable learning environments allowed for self-expression and exploration of a variety of educational experiences.

In multi-age settings, the students had a responsibility for the effective overall functioning of the group. Students had significant control over what happens to them in the classroom and had choices about what they did. The process of giving students control over their learning experiences was accomplished through the use of small group organization for instruction. Students had input into their small group partners and formed relationships with these partners as they moved through varied teacher-planned activities during the day. Small group periods also included time for free choice where students could pursue their own interests with or without teacher guidance. Activities for small groups were frequently scheduled. The schedule

provided the necessary structure so that the classroom transitions were orderly and so that student learning time was maximized. The teachers planned specifically designed activities for the small groups and designed activities to challenge the older and more capable learners in the small group while providing other times for olders to help younger and less able students learn. The teachers established individual goals for students and utilized mini-lessons to regroup students according to their instructional needs. On occasion the teachers would use whole group instruction with all class members present. Whole group lessons were used to review or decide on process, rules and procedures. These housekeeping sessions were also used for orientation to new experiences and to describe the roles and responsibilities of students and staff.

Teachers reported that it is important in a multi-age setting to create a safe and natural learning environment that is similar to a family grouping. Students of different ages learn together and have responsibilities to help each other. Small group work helped students develop socially as well as academically. In multi-age classrooms, teachers reported that social skill development was as important as academic skill development.

Staff and students reported some distinct advantages to multi-age grouping. One advantage was that multi-age grouping was seen as enhancing cooperation among students. The staff reported that multi-age grouping allowed for individual differences to be accommodated and reduced the pressure to conform or to reach grade level standards. Thus multi-age settings tended to be less competitive. Another student advantage cited by participants was that the younger students are able to learn from older children, to get help from others, and to get a preview of

future instruction by watching the teacher instruct older students. The preview enabled students to have thoughts about the task ahead of time so when it was their turn to learn or apply the concept they had some experience base. This factor accounted for why youngsters frequently watched the instruction being conducted with older children. In multi-age small group instruction, students heard and saw the concept being repeated before, during and after their own direct instruction.

Staff and students reported that socially, over a period of years, students in a multi-age class grouping had the chance to be the leaders and the helpers. They had the opportunity and the privilege of both being looked up to and of being nurtured by other children. A multi-age setting was described to be like a natural family group where the roles of the children change as the family group grows and matures. More stability and a better bonding of students to students and students to teachers was possible in a multi-age setting where students formed relationships and played different roles over a number of years in the same classroom. According to the principal, students were able to "grow into" their multi-age classroom. This classroom plan that allowed students to spend multiple years in the same classroom was viewed as a very positive aspect of multi-age grouping by the participants.

According to staff reports, in a multi-age setting students with different abilities in content skill areas were better able to have their needs met. A student who was an excellent reader but lacked math skills was better accepted in a multi-age setting due to the naturally occurring differences in student abilities. Staff reported that students in multi-age settings were more able to learn at their own pace and seek out their own experiences due to the varied small group make-up and an emphasis on student choice.

Multi-age classroom teaching involved a commitment to looking at students as individuals, with differences that should be accommodated rather than eliminated. In a multi-age setting, students could be different and still belong, challenging the teacher to be more creative, flexible and resourceful in order to meet different needs. For one child, hands on learning was appropriate, for another work groups, for another independent study. The recognition of differences in learning needs and cognitive style, and then planning to meet those needs, was a commitment made by teachers in multi-age settings.

The reasons given by teachers for their commitment to multi-age group instruction were intensely personal. Many of the teachers expressed dissatisfaction with their own traditional school experiences. Others related their own positive real life experiences as reasons for commitment to the practice.

Teachers in multi-age classrooms based student goal achievement on an individual profile rather than by pre-set grade level standards. Individual assessments using portfolio, criterion reference testing, and student self-reports were utilized to keep track of student progress. Instruction based on individual profiles resulted in less student failure than in classrooms where grade level achievement standards were fixed. Teachers at Hill School also reported that there was little need to consider grade retention for students due to a multi-age format that gave students more time to develop and grow. There was no evidence that teachers utilized standardized test results to plan curriculum, group students or assess individual achievement.

Evidence gathered during observations and interviews confirm that multi-age grouping created the need for the staff at Hill School to work closely together. Interdependence was necessary due to the sharing of students, need for joint

planning, and the high level of student choice of activity. Consistent staff communication, cooperation and mutual understanding was necessary to facilitate the instructional practices utilized in connection with the small group work. The staff members interacted several times daily. The whole staff met weekly and discussed school operations and philosophy. The staff utilized a school improvement model to set goals for program organization and instruction.

The staff expressed some issues of concern about multi-age grouping. One of the concerns expressed was about the lack of common language, both within the building and among educators, to describe the practice of multi-age grouping. Staff members prefer to use the terms multi-age grouping or family grouping to describe their program organization. These terms allowed students to be viewed more as individuals than being identified by their grade labels. The staff at Hill felt strongly that multi-age classes and splits or split grades should not be equated. Split classes were viewed as two or more disjointed groups of students put together.

The teachers at Hill identified a number of concerns related to how others perceived their practice. There was concern that educators, parents, and the community at large did not have enough information about multi-age grouping. There was also a concern about how the high noise and activity levels were viewed by others. Staff at Hill also expressed some concerns related to instruction. The upper grade teachers viewed multi-age grouping as more work due to the need for additional planning and the pressure to cover pre-set content. Many of the staff found it difficult to locate appropriate instructional materials due to a lack of open-ended, commercially-prepared materials. They cited this lack of appropriate, commercially-produced materials as a frustration. Teachers reported that the district-

purchased stock textbooks and workbooks are rarely used for instruction and that it takes much more effort to create and locate curriculum materials that are appropriate for an instruction program based on individual student needs and interests.

Teachers reported that instruction in multi-age classes was a viable organization method for instruction if the students work together to accomplish desired outcomes. Small groups included students of similar ages helping each other, referred to as peer tutoring, as well as students of different ages working together. Cross-age tutoring, with students of different ages purposely grouped together to enhance learning, was an instructional grouping practice utilized to various degrees by each teacher at the study site. Frequently, the teachers provided direct instruction on how students can work together. The teachers encouraged students to help each other both academically and socially. Activities are planned by teachers that teach olders how to help youngers. The instructors also plan activities that are directly targeted at the older students to insure that the needs of students with more abilities are addressed.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS, AND REFLECTIONS

The researcher's purpose in this study was to describe how multi-age classrooms are organized for student instruction and to report what elementary school teachers say about their experiences with the practice of multi-age grouping and the instructional strategies they utilized that enable students of different ages and identified grade levels to be educated together.

In this chapter, answers to the questions posed in the study are reported. Conclusions drawn from the data are reported, along with implications for educators to consider. Recommendations which seemed to follow from the results of the study are reported. Reflections that developed from the experience of collecting the data are also provided from a personal perspective.

The data are presented as responses to the research questions from Chapter I. The implications and recommendations for further study are based on the conclusions drawn from the data.

Summary of the Data

Research Question One

How are multi-age classrooms organized for instruction and what instructional strategies are typically utilized in these settings?

An analysis of the data obtained from the study of multi-age grouped classes revealed that classrooms of this type, particularly at the elementary level, utilized small groups as the primary organizational practice for providing student instruction. This utilization of cooperative small groups, which are heterogeneous in nature, formed the framework for guiding the daily routine. Small groups were used to enhance social skill development, as well as to enable academic learning to occur. The multi-age classroom teachers facilitated small group learning that promoted opportunities for student choice in learning. Student work activities evolved from the students' own interests as well as from teacher-directed assignments. The use of small group instructional practice created a system where students could interact with each other, learn from each other, and take responsibility for many of their own learning experiences during the school day.

Through the use of cooperative small groups, teachers were able to design classrooms where students of different ages and identified grade levels could be feasibly educated together in a single classroom. Teachers in multi-age classes relied on student-helping-student strategies as an instructional method. Students frequently worked and played together with little or no teacher intervention. Peer (same age) tutoring and cross-age tutoring were arranged by the teacher and occurred by student choice throughout the day. Teachers used these peer empowerment strategies to enable them to work with individuals and groups around identified need and interest areas. Student-to-student helping and tutoring techniques were taught by teachers. Teachers provided direct instruction to students related to helping others, both socially and academically. The power of these interactions was harnessed by teachers in multi-age settings. Students frequently modeled the behaviors of other students.

Teachers allowed younger, less mature, or slower rate learners to observe other students during teacher-directed small group lessons. This "preview" gave students, who had less experience with a concept, an opportunity to view the lesson content and learn the expectations of a situation before they were asked to participate directly in the activity.

Teachers arranged their classroom schedules, physical layouts and activities to facilitate small group interactions. The day was scheduled in choice and activity periods so students worked in small groups. The occasional use of designated whole-class periods was a consistent pattern.

Teachers organized activity areas or centers for small groups of students to work in. Although teachers had different systems for small group formation and interaction, the planned use of a variety of learning activities occurred simultaneously in each classroom.

While teacher-directed small group instruction was being provided to some students, directed toward an academic outcome, other students were engaged in play. The choice to play was encouraged in each classroom for at least some part of the day.

The majority of the time that students spent in multi-age classes was spent in small groups for instruction. Although the type of student experience varied with the age of the student, the teacher organized activities in centers or activity areas which corresponded to the interest of the child or allowed for play. The classroom instruction focused on cognitive, academic, and affective outcomes. In general, students were allowed a high level of choice and were allowed to move freely within the classroom. In planning the day, teachers scheduled a lot of movement and

change. Scheduled changes occurred approximately every 30 minutes and permitted movement to a new small group activity.

Teachers organized whole group sessions in multi-age classrooms primarily to provide orientation to upcoming activities, to review rules, or to conduct class meetings. Class meetings were used for "housekeeping" matters and to review procedures. Each class spent a minor portion of the instructional day in a whole group session. Occasionally, whole class grouping was utilized for content instruction, a demonstration or a speaker.

Multi-age group classes were organized on an annual basis so that students spent multiple years with the same teacher. Many of the students returned to the same classroom for two or three years. These returnees knew the routines, expectations, and other students in the classroom. Teachers used returnees to orient new students in the beginning of each year.

Teachers used instructional strategies and organizational systems to monitor student progress and report student accomplishments individually. In the multi-age setting, there was little normative comparison of student progress. Teachers used project work to challenge students and set individual expectations for performance. Student work folders, portfolio collections, contract completion, and student self reports were used as systems to keep track of student achievements.

Teachers frequently assigned project work based on interest. These projects included written reports, illustrations, drawings, oral reports, book reports, and individually assigned textbook or worksheet completion. Teachers met with students individually or in small groups to check work completion and to provide feedback. Parent and student meetings were utilized by teachers to develop personalized goals

and/or contracts and to provide a system for evaluation of student progress.

Research Question Two

How do teachers describe the operation of multi-age classes?

Teachers experienced with multi-age groups were asked to describe the operation of the classroom and to provide a rationale for the utilization of multi-age grouping. Teachers reported that multi-age classes enabled them to accommodate individual differences. Because students have different needs, abilities, and learning styles, teachers set up classes so that students could develop skills at different rates. Teachers reported having flexible expectations for student achievement. To accomplish this, teachers designed a variety of learning opportunities and, with guidance, let students choose the experiences that best fit their readiness level.

In the multi-age classroom, the role of the teacher was one of a facilitator rather than the director of learning. Teachers described the multi-age classes as a structure that is designed to build on a child's interests and past experience. There is less emphasis on covering certain prescribed grade level content in a pre-set timeline. This lack of grade level content structure in the early elementary grades created the ability to make multi-age grouping work. According to teachers, students were able to pursue their own interests, work or play at their own pace, and explore a variety of learning experiences by moving to different work areas or centers.

Teachers described their role in the multi-age classroom as mentor, counselor or resource person. Whatever system the teachers used to form small groups, there was a common understanding that students are capable of making choices and a belief that students can learn appropriate information and behavior from each other.

Teachers designed multi-age classes so students could help each other. There

were many options or choices for learning, and students were encouraged to work independently or with a friend. Teachers described multi-age classes as comfortable learning environments that allow for student self-expression and an exploration of a variety of educational experiences. Students had a responsibility for the overall functioning of the group. They had significant control over their own learning experiences. The process of giving students control over their own learning experiences was accomplished through the use of a small group type of instructional system where students had input into their learning partners.

Multi-age classes worked to enhance social as well as academic outcomes, according to teachers. Teachers reported that social skill development was as important as academic skill development.

Research Question Three

As a result of their involvement with multi-age classrooms, what experiences do participants report that have affected their viewpoints, attitudes, and understandings about student learning?

Staff involved as participants in this study reported many expressions of faith in the multi-age grouping system. These values developed out of their experiences both inside and outside of the classroom.

Participants expressed many positive learning realizations due to their association with the practice of multi-age grouping. The major patterns that emerged included growing sensitivities to the realities of how children develop; the need to recognize, accept and accommodate individual differences; the need for students to learn cooperatively; the need to reduce school failure; and the need to re-educate the educational community and the larger society in order to expand the benefits of

multi-age group practice.

The vast majority of the participants believed that multi-age classes enhance cooperation among students. The participants reported that multi-age grouping allowed for individual differences to be accommodated and reduced the pressure on students to conform, thus reducing competition. Participants found that when staff and students spent multiple years together in the same class, the result was increased respect and the development of positive attitudes toward others.

The fact that students and staff grow closer together over multiple years was seen as a real advantage by many participants in multi-age settings. Students in the class felt more comfortable, were better accepted, and helped each other learn when the familiarity of a long-term relationship was possible. This multiple-year involvement evoked some of the strongest positive responses from teaching staff. Multiple-year placement, according to teachers, helped save instructional time, enabled teachers to really see growth in student abilities, and enabled strong bonds to develop among students and between the teacher and the students. Teachers were more invested in students under this organizational design. Many teachers described spending multiple years with students as being like developing family relationships.

Overall, multi-age teachers viewed students as individuals and realized, through their experience, that students are all different in their interests, abilities, and learning styles. The willingness of teachers to accept and accommodate diversity in the classroom was enhanced by their teaching experience in a multi-age setting.

Because students were able to spend multiple years in a single class, and because progress was assessed individually, there was less school failure. In general, teachers realized that it was best to encourage each student to progress at his/her

own rate, determined by the person's interests, academic knowledge base, social preferences, and capacities. Teachers in the multi-age settings observed realized that in that environment the above-average student was not restrained from progressing beyond grade-established norms, and less mature or slower-rate learners were not required to undertake impossible tasks merely because of predetermined standard grade expectations. Curriculum adjustments were made without having to resort to failure or grade retention.

As a result of their own experiences in school as children or in the workplace as adults, many of the participants in a multi-age setting have come to see that multi-age grouping reflects the real world outside of the classroom. The fact that adults and children live in a world full of diversity has affected the perceptions of staff about practices in schools. The fact that outside of school students live and work with people of different ages was used as justification for multi-age grouping. People of different ages learn from each other outside of schools, form friendships, and enjoy the same activities. The use of age/graded systems was seen as restricting student experience. One key element that participants realized as a result of their experience was that older students in a classroom were able to help younger or less experienced students, freeing up the teacher to work with those students who needed direct teacher intervention. The teaching staff especially valued student tutoring and helping opportunities that occurred in their classrooms and between students in neighboring classes.

When participants began reflecting on their own school experiences, there appeared a pattern of personal dissatisfaction with traditional graded systems. It appeared that many of the staff chose to teach in a multi-age setting because of

unfulfilling experiences in their own school careers. For some participants, however, the opposite was true. Their own school experiences as a student or teacher in a one-room schoolhouse, informal school or open school environment provided a positive impetus to begin or continue an association with multi-age classes.

As a result of their experiences with multi-age teaching, the upper elementary fourth and fifth grade teachers believed that multi-age group instruction was more work for teachers. This view, however, was not shared by teachers in the earlier grades. There was general agreement that multi-age group teaching is definitely more work for teachers when a class is taught as if distinct grade groupings of students need to learn distinct grade level content. The notion of split grades reflects this practice. Experienced multi-age group teachers rejected the practice of split grading as unrealistic and unproductive. They viewed multi-age grouping as a very different practice.

Teachers in multi-age settings reported increased interdependence within the system. More time was spent sharing students and materials. More planning was necessary among the faculty because classrooms shared students, and cross-age programs, such as reading buddies, needed to be planned and structured. Teachers frequently met after the student school day to plan joint activities. These collaborative relationships were both formal and informal. The principal encouraged cross-age/cross-class groupings and team teaching. Staff meetings were held weekly and frequently focused on shared-activity efforts and school-wide initiatives.

This additional planning time may account for the statements by some of the upper grade level teachers that multi-age grouping was more work. Clearly, the practice required significant planning time and collaboration for the teaching staff.

This was necessary due to the frequent occurrences of sharing students, planning cross-age experiences, and the teaming of teachers for certain curriculum activities.

The experiences of teachers in multi-age settings led them to believe that there are significant problems with public perceptions of the practice and that a total re-education is necessary for parents, educators, and the community-at-large to see the valuable aspects of multi-age group instruction. According to the participants, multi-age grouping constitutes a significant paradigm shift. The differences between traditional age/grade instruction and multi-age practice are more significant than a change in the ages of students in the room. Multi-age class instructional methods create a much different environment for learning than people are accustomed to. Multi-age classes tend to be noisy, lack neat order, and lack standardized expectations for achievement. The classroom learning was not based on textbooks and normative grade level achievement measures. In short, the participants felt that the practice is misunderstood and not accepted as valuable in the community. The desire was to have educators and parents better understand the value of multi-age grouping and accept the practice as a valuable alternative to the predominant age/graded system.

Conclusions and Implications

An analysis of the data led to some important conclusions being drawn about multi-age group teaching. The conclusions and the implications of the findings for teaching and learning are reported in this section.

Clearly multi-age group teaching as a concept is different than split grade configurations. The practice of splitting grade levels involves putting two distinct grade level groups together in order to reduce the number of grade sections. When grouping for administrative convenience in split grades occurred, the same grade level

expectations, standards, and structures that were typically used in single age/grade classes often continued to be employed. The concept of multi-age grouping was based on a different philosophy about classroom organization, student learning, teacher roles, and instructional practice. Although similar in some attributes, multi-age grouping placed students of different ages together in a single classroom to enhance learning outcomes for the students. A lack of information on the underlying rationale for multi-age grouping led many educators to be confused about this practice. Clearly a change in the organization of a classroom in and of itself is not enough to change instructional practice or bring about different student learning opportunities or outcomes.

Unfortunately, when teachers are not well versed in the instructional strategies associated with multi-age group practice, they may continue to teach as they did in a single graded class, even though the age group has been changed. Teachers can use the same books, methods of instruction, and measures of student performance in multi-age group classrooms as they do in single-grade classes. They can also expect grade-type results from students in multi-age settings. A change in organization of students does not easily translate into a change in classroom instruction. The implementation of the instructional practices associated with multi-age grouping; the predominant use of cooperative small group instruction; the use of student-helping-student strategies; multiple years within the same classroom; a reduction in student failure; learning groups based on interest (rather than ability); progress assessed continuously; enabling student choice of activities; and, accommodating individual differences are the improved outcomes that can occur in multi-age settings. These practices are more likely to be found in multi-age settings,

but are not necessarily utilized in a setting simply because it is multi-aged.

Implementation of the instructional techniques and organizational systems associated with multi-age grouping requires far more than an administrative decision to regroup students into multi-age classes. Both teachers and parents need to understand the learning dynamics associated with the multi-age grouping system. Parents and teachers need to maintain continuous communication on student progress within this framework. Many barriers exist to the acceptance in our society of the practices associated with multi-age grouping. Most textbooks, workbooks, and tests have a deep-rooted grade-level orientation as their basic framework. Teachers, administrators, and parents have long had personal associations with grade-level identities. It is not possible to move rapidly away from a program system that has become so deeply ingrained as part of the school and community lives of several generations of adults. A real change in practice will require a long-term commitment to the re-education of the entire education community.

The philosophy of multi-age grouping is rooted in the research from child development literature. There is ample evidence that students of the same age learn and develop at different rates. The underlying assumptions of multi-age grouping recognize these differences and set up instructional programs to accommodate these differences. Teachers in multi-age settings allowed students to progress at their own rate, evaluated outcomes individually, and provided opportunities for students to engage in self-selected learning activities. Research on individual learning and developmental profiles indicates that there is a wide variance in "normal" learning patterns. The use of small group learning centers, student-helping-student strategies, and student choice of activities based on interest created the instructional foundation

that enabled teachers to respond to individual needs. In contrast, the instruction in many schools that is prescribed by grade norms bewilders children because it outruns their experience.

With so many different ages, identified abilities and needs represented by children in multi-age classes, there was less need for competition. If a child read slowly or had problems, he/she had the time to work on the skill without the pressures of failure or retention. Teachers in multi-age classes could take time to get to know children and accept their differences because they spent multiple years together. Acceptance of differences in student cognitive, affective, and psychomotor growth resulted in less need for comparison of students to norm referenced indicators of progress. When teachers accommodated individual differences, students experienced less failure, competition, and grade retention. The satisfaction that students at Hill School showed about their own accomplishments, their willingness to share their accomplishments with visitors, and the involvement of the students in new learning experiences indicated that the instructional strategies utilized at Hill School created a high level of motivation for many students.

The learning that occurred in multi-age classrooms was not necessarily a product of teacher-planned instruction. While initial reaction to the classroom activities was one of noise and confusion for the visitor, classroom observations provided evidence that significant student learning was occurring. Many of the traditional observations of a "good" classroom learning environment were absent in these multi-age settings. The classrooms were not quiet, orderly or systematically planned by the teacher. Instruction and learning activities were not dominated by the teachers. Students did not all have the same expectations for learning achievement

or the same goals. The indicators of an orderly, structured, teacher-directed, disciplined, neat, well organized classroom setting typically associated with "sound traditional practice" were not characteristic of these multi-age classes. Learning in multi-age class occurred in many different ways, with many different outcomes. Students worked together on cooperatively designed learning experiences. Students directed their own experience to a large extent. The role of the teacher as counselor, mentor or assistant was very unobtrusive. Order was present, but a look beyond the traditional type of organization was necessary for the order to be seen. Students played and students taught each other. Students had time to choose and they had time to watch. There were many acceptable ways for students to use their time. Experience-based learning was valued and the choices made by students were recognized as legitimate. Learning in multi-age classrooms was recognized by teachers as occurring through many kinds of interactions, not necessarily a product of teacher-planned lessons.

The practice of students spending multiple years with the same teachers and peers in a classroom was valued. When teachers and peers worked together over a number of years, the relationships established were valued and the learning experiences were enriched. Knowledge of students by teachers, students by other students, and teachers by students was obtained in a cumulative manner. When classroom groups worked together over a number of years, the interests, experiences, gifts, and needs of the individual participants were better understood by those close to them. The illustrations of family grouping relationships, and the data that indicated that students "grow into" their multi-age classroom provided evidence that the roles of the students changed over the years. Teachers spent less time with

classroom orientation and management. They depended on the returning students to help the new members of the class family. Teachers were better able to actually see student growth as personal testimony indicated. Returning students were able to get involved in meaningful learning right away as the school year began, virtually picking up where they left off. Parents, too, had lasting relationships with the teachers.

Although there were certain belief patterns common among the multi-age classrooms teachers, there was considerable variety from class to class in how teachers planned their day. No two classes, even in the same school, were exactly alike in terms of instruction. An underlying assumption in the multi-age classes was that studies in an enriched and planned classroom supported the natural drive toward learning that children have, and that children learned from each other, from books, and from encounters with things around them. Teachers also believed that: children learn at their own pace; children learn most intensely when they are interested in what they are doing, and when the activity is relevant for their life; children are capable of making good choices. There were few whole class lessons, and little emphasis on rigidly enforced curriculum. The role of the teacher was important. The teachers were rarely concerned with instructing the class as a whole or even with "individualizing" the identical material to enable each child to cover the same content at their own pace. Instead, the teachers fostered personalized learning which developed out of each child's particular needs and interests. "How" a child went about learning concerned the teacher as did "what" the child learned.

Teachers in multi-age settings need to work closely together, collaborate, and cooperate to facilitate instruction. In multi-age school settings where student choice,

cross-age tutoring, freedom of mobility, and the development of learning groups based on interest are characteristic, teachers must work closely together. Teachers frequently shared students, activities were self-selected, and joint classroom student tutoring sessions were held. This created the need for cooperative planning, regular communication, flexibility, and a faith in the competence of colleagues. Interdependence can create strength in the instructional program, but also can create an increase in situations where conflict can occur. A faculty considering a change to multi-age grouping, with implementation of the associated instructional components, must consider the ability of the faculty to work together. Failure to establish collaborative faculty relationships may result in significant conflicts. The multi-age teacher situations observed required the sharing of responsibilities among the staff so that varied learning opportunities could occur.

Recommendations for Practice

If major success in effecting student school achievement and social adjustment are to be realized, alternatives to the procedures presently and routinely initiated to provide instruction must be designed. Rather than relying on superficial manipulation of organizational variables to realize this end, procedures for changing directly the practices clearly associated with learning and instruction must be developed. Modifications in organizational patterns, age grouping practices, and staffing designs are simply insufficient, in and of themselves, to bring about significant positive change in the American elementary school.

It is recommended that the implementation of practices associated with multi-age grouping be viewed as more than just an administrative change in class organization. It takes a re-education of teachers and changes in their practice. It

takes a re-education of the public about expectations, outcomes, the teacher's role in the classroom, and the necessity for teachers to work together. The public perception of what schools should look like, feel like, and sound like must be challenged. The practice of having neat rows of desks, a quiet library-like environment, lockstep curriculum, a priority focus on teacher-directed content skill development, promotion based on achievement, and grade level curriculum expectations needs to be challenged in order to implement the organizational and instructional practices found in the multi-age classes reviewed in this study.

Clearly a better understanding of the philosophy behind multi-age grouping needs to be learned by educators. Differentiating multi-age practice for instructional reasons from split grading for economy and administrative purposes is necessary if the practice of multi-age grouping is going to be understood by educators. Writing and dialogue about the differences in rationale behind various age/grade configurations is essential for meaningful study to take place and for communication to occur about the impact of different age/grade grouping practices on student learning.

In order to accept student experience-based learning, play, and student choice as valuable ways for students to spend their time, it is important for educators to look beyond traditional indicators of "good" teaching and classroom management.

Research from the field of child development, and a belief that children are capable of making choices, forms the basis of the multi-age philosophy. It is truly a leap of faith for many teachers to put in the hands of students the power to guide their own learning experiences. Teachers at Hill believed that students were capable of making good choices, if they had a rich environment to explore and a basic

structure for the classroom operation. These beliefs have significant implications for changes in practice for teachers who dominate the classroom experience and who seek control. The underlying beliefs that students are capable, responsible and self-directed are significant factors for teachers to consider when discussing multi-age grouping.

The multi-age grouped primary school structure replaces certain organizational rigidity with flexibilities. Contained in this study are descriptions of ways that instruction can be provided in multi-age settings and descriptions of techniques that can be used to obtain greater student involvement and control in monitoring and guiding their own development. The extent to which multi-age grouping facilitates the use of these techniques and strategies that affect student learning is not easily explained. It permits, but does not guarantee, a transfer of some of the decision making regarding the instruction to students. It is recommended that this transfer of decision making occur to a greater degree to increase student motivation and to develop, within students, the abilities necessary to self-direct lifelong learning experiences.

It is recommended that multi-age class grouping not be seen as an end, but rather as a means to an end. Properly used by a faculty dedicated to meeting the instructional needs of students, multi-age grouping can free teachers from the lockstep process of teaching students of the same age and identified grade level the same content, at the same rate, at the same time. At the heart of the educational process lies the child. No advances in organization, policy, equipment or physical plant arrangement will have their desired effect unless they are in tune with the child's needs. We know a little bit about what happens when a child is deprived of

basic needs, stimulation, love, and belonging. We know about the effects that a lack of exposure to books and spoken words can have on learning. We know much less about what happens to a child who is expected to learn information that is perceptually, intellectually or socially inappropriate to their age and level of development or individual needs and interests. Learning experiences defined by grade level placement appear to all but ignore the realities of child development.

It is recommended that the body of knowledge of how children develop be a primary consideration when designing educational practices. One of the most important concepts in the child development literature is that primary age school children learn most efficiently from concrete situations, lived or described. From these experiences, children acquire concepts in every area of the curriculum. Therefore, "play" needs to be a central activity in all primary school experiences. The idea of playing in schools sometimes leads to accusations that children are wasting time in school. These accusations lie in notions that what is done in school is defined as "work" and what is done out of school is "play." We know now that play, defined as "messing around" with either material objects or other children, thus creating fantasy, is vital to a child's learning and is, therefore, vital in school.

The intense interest shown by children in the world about them, their ability to concentrate on what is occupying their immediate attention, and their need to explore and experience is well known by educators. Skills in reading and writing or the techniques used in art are best taught when the need for them is recognized by the child. A child who has no immediate need to learn a skill is unlikely to be successful. There is, therefore, good reason for allowing children in the elementary grades to choose, within a prepared, safe and enriching setting where choices and

interests are supported by teachers.

Teachers must rely on both their general knowledge of child development and on detailed observation of individual children in order to establish appropriate expectations for each child and plan for enriching school experiences. The absence of arbitrary grade standards in multi-age classrooms can facilitate the development of these personalized expectations and experiences without pressure for "normative" achievement level attainment.

It is recommended that teachers work collaboratively and that interdependence among the school faculty be fostered. When teaching professionals work together to plan student learning opportunities based on interest and organize schools so students help each other learn, the instructional practices associated with multi-age grouping are strengthened. Consistent and meaningful dialogue among the staff helps create a school environment where teachers can model cooperative working relationships for students. Opening up opportunities for students to participate in activities in work groups in other classrooms enables more variety and can provide more enriching experiences for students. Indeed, the sharing of student responsibility, although creating the potential for conflict, enables teachers to share ideas, eliminates teacher isolation, offers more learning options, and enables teachers to talk about instruction. Innovation is more likely to occur when teachers share ideas, beliefs and instructional plans.

It is recommended that teachers utilize student-helping-student strategies to manage classroom instruction and enhance student learning. Students learn from each other. The potential that peer tutoring and cross-age tutoring holds for the improvement of instruction is great. Teachers need to see the value of students

helping each other learn, both for the student being tutored and for the student doing the tutoring. When students teach a skill to someone else, the person doing the teaching is able to practice his/her own skills and also think through the process of instruction. Teaching others demands a high level of understanding of the content and often results in a feeling of satisfaction for the tutor. The use of cooperative small groups enables students to interact, share information, and help each other learn. The benefits of using student empowerment strategies needs to be better understood by teachers.

It is recommended that teacher pre-service and inservice experiences contain information on the benefits of using student-to-student helping strategies, and that teachers be instructed on how to organize classrooms to facilitate student-helping-student learning experiences.

The importance of multi-age grouping is not in the organizational pattern, but in the transformation of what and how teachers teach and students learn. When multi-age grouping is used by a faculty to meet the personalized learning needs of students, the process can have a significant effect on practice and outcomes. Multi-age grouping should not be viewed as an objective but rather as a tool that enables teachers to make the curriculum more meaningful for students, that fosters independence in learning, that promotes an attitude of caring for others, and that encourages students to help each other learn. The process of multi-age grouping is positive to the extent that it accomplishes these teaching/learning objectives and to the extent that it increases students abilities to pursue their own interests and expand their learning experiences.

Traditional age/grade grouping, which is the current predominant practice of

class organization in American elementary schools, presents a formidable barrier to achieving these objectives. The organizational and structural switches that are necessary to implement multi-age grouping may provide enough impetus toward the development of different expectations for student achievement so that change may more easily occur in classroom practice. Organizational innovation, however, cannot solve educational problems unless they are basically organizational in nature. A faculty considering a move toward multi-gradedness must not expect the organization in and of itself to accomplish profound educational results. The quality of the contents must be changed as well as the shape of the containers. The tradition of over 140 years of gradedness will not be easily overcome.

Recommendations for Further Study

In order for long-term re-education on a grand scale to occur, more descriptors of instructional strategies that work are needed. It is recommended that the study of promising educational practices, whether they are associated with multi-age classes or not, should continue. The fact that so many promising practices occur in multi-age classes indicates that a continued study of teaching methods associated with this grouping plan is appropriate.

Further study is suggested as a follow-up to the findings of this study. The students in this study could be followed through their middle school and high school years to assess their adjustment from a multi-age class setting to single-age classrooms. This information could also yield findings about the outcomes of multi-age grouping on student academic achievement and social growth.

Further study is suggested in researching the process of small-group instruction. It would be particularly beneficial to discover if these instructional

strategies can be utilized effectively in single and age/grade classrooms.

Further study is also needed in regard to the use of student-helping-student strategies. This practice appears to have great potential and to have applicability to a variety of classroom settings.

Further study is also suggested in the area of multiple-year enrollment for students in a single class with the same teacher. Perhaps the information derived from such a study would provide an incentive to develop alternative classroom grouping systems. A study of alternative ways to accomplish multiple-year enrollment could potentially be beneficial for students.

It is suggested that this study be replicated, using a larger population. In this way, the results may be generalized and the instructional practices associated with multi-age grouping can be further described.

Reflections

Although not evident in the data, the perpetuation and dominance of the current single grade level system of class organization appears to be based almost exclusively on tradition. The unquestioned acceptance of grade level expectations, lockstep whole group instruction, and grouping by ability tracking is very disturbing, given ample evidence that these practices are deficient. The fact that so little progress has been made in breaking these traditional practices is even more disturbing. Although blame can be placed at the feet of many, it seems clear that teachers are fit into certain roles under certain expectations and are heavily influenced by only the most immediate forces: the teacher next door and the principal.

It seems that the best hope for improved instructional practices rests with

teachers and administrators at the building level and with pre-service preparation programs. In order to accomplish real change in teaching to institute the instructional practices described within the multi-age classes in this study, meaningful dialogue about these practices needs to occur. Administrators need to encourage this dialogue and need to trust teachers, who in turn must trust and respect students. Centralized administrative "control" of schools seems to have created many of the traditional organizational and instructional practices that need to be questioned, examined and changed to improve schools.

Indeed, administrative reorganization and restructuring will not be enough without the meaningful involvement of individual teachers who are free from "district" and "union" imposed restrictions on their practice. To accomplish this, the field of education needs leaders; leaders who will take risks, question tradition, allow experimentation, and encourage change. These leaders must know the best instructional practices of the day as described in research and insure that this information is available to teachers, parents, and principals as they plan grassroots changes. All members of the educational community must be encouraged to work together to implement changes in instructional practice.

Under current governance this seems unlikely. Perhaps less emphasis on public governance (community-elected school boards) and more education self-governance through professional educator boards can help accomplish meaningful professional self examination.

For many reasons, many promising instructional practices are not being implemented. Experiences that I have had during the process of writing this dissertation have convinced me that there are answers to many of the ills of

American public education. The answers are in current classrooms. There are many promising instructional practices that have not been widely adopted by educators. These practices are known to some. I was very impressed by the ability of the staff at Hill School to implement instructional practices associated with multi-age grouping. There is much to be learned by examining student-helping-student strategies, cooperative small groups, and student interest based curriculum design systems.

We have the knowledge to implement these practices. We need leaders who will provide the vision and teachers who will talk openly about their practice. If members of any profession should be able to share and learn from each other, it should be ours. It should be education.

APPENDICES

Appendix A Formal Patterned Interview Questions

1. Tell me briefly about your professional background and experience.
2. What do you like about multi-age groupings?
3. What do you dislike about multi-age groupings?
4. When/how does cross-age tutoring occur? Peer tutoring?
5. What skills, knowledge and disposition do multi-age classroom teachers need?
6. How is the curriculum/content structured?
7. What are the roles of students and teachers in multi-age settings?
8. In multi-age group classroom teaching, what are the biggest challenges? Frustrations? Joys? Satisfactions?
9. What are the benefits of multi-age grouping?
10. How is your classroom organized for instruction?
11. What instructional strategies are typically used in your class?

Appendix B Sample Journal Questions

Name (optional)_____ **Ages of students in your class** ____

Years of teaching experience_____

In the next few weeks, please take time to reflect upon, and respond to in writing, the following questions. Feel free to include additional information that is important to you. All responses will be kept strictly confidential. Please write as much as you feel is necessary to make your point clear and add to your responses over time.

1. Why did you choose to teach in a multi-age grouped classroom?

2. How and when did you decide to teach at Hill School?

3. What and who influenced you as a teaching professional?

4. In what ways has your experience with multi-age grouped teaching changed your views about teaching and student learning?

5. As you reflect back on your early education, family life or early teaching experience, what aspects of these experiences have influenced your teaching in a mixed-age grouped program?

6. What qualities or values do you feel are necessary for a teacher to possess to be successful in a mixed-age grouped classroom?

BIBLIOGRAPHY

BIBLIOGRAPHY

Acheson, J.F., "Memorandum on Combined Grades," Edmonton Catholic School Board, Edmonton, Canada, October, 1984.

Anderson, Richard, "Case for Nongraded, Homogeneous Grouping," Elementary School Journal no. 62, January, 1962.

Anderson, Robert H. and Goodlad, John I., The Ungraded Elementary School, Revised Edition, 1967.

Anderson, Robert, "Shaping Up The Shop: How School Organization Influences Teaching and Learning," Educational Leadership, February, 1987, p. 45.

Baker, T. P., "Curriculum Design - Strengths and Weaknesses of the Track System," Bulletin of the National Association of Secondary School Principals, April, 1961, pp. 69-74.

Balow, Irving H., "Does Homogeneous Grouping Give Homogeneous Groups?" Elementary School Journal, 63, October, 1962, pp. 28-32.

Bayles, Ernest E. and Hood, Bruce L., Growth of American Educational Thought and Practice, Harper and Row, New York, 1966.

Berliner, David and Casanova, Ursula, "Peer Tutoring: A new look at a popular practice," Instructor, January, 1988, vol. 97, no. 5, pp. 14-15.

Brown, Kenneth and Martin, Andrew, "Student Achievement in Multigrade and Single Grade Classes," Education Canada, Summer, 1989, pp. 11-14.

Bunker, Frank F., Reorganization of the Public School System, Department of Interior, Bureau of Education, Bulletin No. 8, Washington, D.C., Government Printing Office, 1916.

Carbone, Robert F., "A Comparison of Graded and Nongraded Elementary Schools," The Elementary School Journal, 62, November, 1961, pp. 82-88.

Carnahan, David J., "More Questions than Answers: Large Group Learning Spaces, Education, February-March, 1969, pp. 213-14.

Church, Robert L. and Sedlak, Michael W., Education in the United States, The Free Press, New York, 1976.

Cloward, Robert D., "Studies in Tutoring," Journal of Experimental Education, 36, Fall, 1967, pp. 14-25.

Cohen, Deborah, "First Stirrings of a New Trend: Multi-age Classrooms Gain Favor," Education Week, Dec. 1989, vol. IX, no. 14, pp. 13-15.

Coleman, James S., et al., Equality of Educational Opportunity, Washington, D.C., U.S. Government Printing Office, 1966, p. 743.

Collier, Calhoun, "The Nongraded School," School and Society, January, 1966, pp. 32, 50.

Cotton, Kathleen, "Peer Tutoring: Lake Washington High School, Benjamin Rush Elementary School, Effective Practices in Place, Snapshot, No. 5, School Improvement Research Series, Portland, Oregon, February, 1988.

Cowen, Philip A., "How the Graded School System Developed," The Nation's Schools, vol. VIII, no. 3, September, 1931.

Cubberley, Ellwood P., Public Education in the United States, Houghton Miflin, New York, 1947.

Cubberley, Ellwood P., The History of Education, Houghton Miflin, New York, 1948.

Dean, S.E., Elementary Principal's Letter, vol. 5, no. 5, Croft Ed. Services, December, 1965, p. 1.

Dean, Stuart, Non Graded Schools, U.S. Department of Health, Education and Welfare, Office of Education, Education Brief, no. 1, Washington, D.C., Government Printing Office, July, 1964.

Dufay, Frank R., Ungrading the Elementary School, Parker Publishing Co., West Nyack, New York, 1966, pp. 23-24, 31, 37, 65.

Eby, Frederick, The Development of Modern Education, Prentice-Hall, Englewood Cliffs, New Jersey, 1952.

Erickson, F., "Qualitative Methods on Teaching," Handbook of Research on Teaching, MacMillan, New York, 1987.

Finley, C.J. and Thompson, J.M., "A Comparison of Achievement of Multi-graded and Single-graded Rural Elementary School Children," The Journal of Educational Research, May-June, 1963, pp. 471-475.

Ford, Bonnie, "Multiage Grouping in the Elementary School and Children's Affective Development: A Review of Recent Research," Elementary School Journal, November, 1977, pp. 149-159.

Freeman, Jayne, "How I Learned to Stop Worrying and Love My Combination Class," Instructor, March, 1984, pp. 48-54.

Gajadharsingh, J., "The Multigrade Classroom in Saskatchewan," The Saskatchewan Educational Administrator, Spring, 1982, pp. 2-41.

Garvey, James, "Possible Over Emphasis on Large Group Instruction," Education, February-March, 1969, pp. 213-14.

Gelb, Steven, A Guide to Working with Minority Language Students, Washington State Superintendent of Public Instruction, Olympia, Washington, Division of Instructional Services, 1982.

Gillespie, Ross J., "A Study of the Continuous Progress Curriculum of Leonard Elementary School; Southfield, Michigan," June, 1974, Dissertation Report, Eastern Michigan University.

Goodlad, J. I., Behind the Classroom Door, Wadsworth, Belmont, California, 1970.

Goodlad, J. I., "A New Look at an Old Idea: Core Curriculum," Educational Leadership, January, 1987, vol. 44, no. 4, p. 8-18.

Goodlad, John I., "Classroom Organization," in Encyclopedia of Education Research, Chester Harris, Editor, Macmillan, New York, 1960, pp. 221-25.

Goodlad, John I. and Anderson, Robert H., The Non-Graded Elementary School, Harcourt, Brace and World, New York, 1963.

Goodlad, John I., "A Study of Schooling: Some Findings and Hypothese," The Phi Delta Kappen, Phi Delta Kappa, vol. 4, no. 2, March, 1983.

Halliwell, Joseph W., "A Comparison of Pupil Achievement in Graded and Non-graded Primary Classrooms," Journal of Experimental Education, 32, Fall, 1963, pp. 59-60.

Henry, Tamara, "Governors Take Teaching Tools in U.S. to Task," Lansing State Journal, July 29, 1990.

Hillson, Maurice; Jones, Charles and Moore, William, "A Controlled Experiment Evaluating the Effects of a Non-graded Organization on Pupil Achievement," Journal of Educational Research, 57, July-August, 1964.

Holley, B.J.; Taylor, P.H.; Reid, W.A.; and Exon, B., Purpose, Power and Constraint in the Primary School, London, 1973.

Howard, E. and Bardwell, R., How to Organize a Non-Graded School, Prentice Hall, Inc., Englewood Cliffs, New Jersey, 1966.

Howard, Eugene R., How to Organize a Non-graded School, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1966, pp. 10-50.

Hunter, Madeline, "The Dimensions of Nongrading," The Elementary School Journal, 1964, LXV, no. 1, pp. 80-82.

Ignaz, Edward and Corsini, Raymond J., Alternative Educational Systems, F. E. Peacock Publishers, Itasca, Illinois, 1979.

Johnson, D.; Johnson, R.T.; Johnson, J.; and Anderson, D., "Effects of Co-operative Versus Individualized Instruction on Students' Prosocial Behavior, Attitudes Toward Learning, and Achievement," Journal of Educational Psychology, 68, 1976, pp. 466-452.

Justman, Joseph, "Reading and Class Homogeneity," The Reading Teacher, 21, January, 1968, pp. 314-34.

Knoblock, Peter and Berries, Michael, Program Models for Mainstreaming, Aspen Publishers, Rockville, Maryland, 1987.

Martin, George H., The Evolution of the Massachusetts Public School System, D. Appleton and Company, New York, 1894.

McClusky, Frederick Dean, "Introduction of Grading into the Public Schools of New England," Part I, The Elementary School Journal, vol. XXI, no. 1, September, 1920.

McClusky, Frederick Dean, "Introduction of Grading into the Public Schools of New England," Part II, The Elementary School Journal, vol. XXI, no. 2, October, 1920.

McKinney, W. L. and Westbary, I., Stability and Change: The Public Schools of Gary, Indiana 1940-70, 1975.

McLaughlin, W.P., Evaluation of the Nongraded primary, St. Johns University, New York State Education Department, Division of Research, 1969, pp. 1-24.

Miller, Richard I. (ed.), The Nongraded School, Harper and Row, New York, 1967.

Monroe, Paul, Founding of the American Public School System, Hafner Publishing, New York, 1940.

Monroe, Paul, Founding of the American Public School System, Hafner Publishing, New York, 1971.

Nachbur, R. "A K/1 Class Can Work - Wonderfully," Young Children, vol. 44, no. 5, July, 1989, pp. 67-71.

National Commission on Excellence in Education, A Nation At Risk: The Imperative for Educational Reform, U.S. Government Printing Office, No. 065-000-00177-2, Washington, D.C., 1983.

National Commission on Excellence in Education, A Nation At Risk: The Full Account, USA Research, Cambridge, Massachusetts, 1984.

National Education Association, Labels and Fingerprints, Washington, DC, 1960, p.7.

National Education Association, "Grade Organization and Non-grading Programs," Research Bulletin, Washington, DC, 1963, pp. 52-92.

National Education Association, "Non Graded Schools," Research Bulletin, 1965, Washington, DC, pp. 1-6.

Ortiz, Edward, "Personalized Systems of Instruction: Santa Fe Public Schools," Executive Educator, vol. 11, no. 10, October, 1989.

Owen, Richard, "Identifying an Underlying Rationale for the Development of the Age-graded Organizational Structure within American Public Education," Michigan State University, Dissertation Report, 1987.

Passow, A. Harry, "The Maze of Research on Ability Grouping," Educational Forum, 26, March, 1962, pp. 281-88.

Perkins, H.V., "Nongraded Programs: What Progress?" Educational Leadership, 19, December, 1961, pp. 166-169.

Pratt, David, "Age Segregation in Schools." Paper presented at the annual meeting of the American Education Research Association, April, 1983, Montreal, Quebec, Canada.

Pratt, David, "On the Merits of Multi-age Classrooms," Research in Rural Education, vol.3, no. 3, 1986, pp. 111-116.

Raschke, Donna, "Cross Age Tutorials and Attitudes of Kindergarteners toward Older Students," Teacher Education, vol. 23, no. 4, Spring, 1988, pp. 10-18.

Raze, N., "Primary and Intermediate Grade Configurations: A Review of the Literature," San Mateo Office of Education, Redwood City, California, SMERC Information Center, 1985, p. 9.

Retson, James, "Are We Back to the Little Red Schoolhouse?" Grade Teacher, February, 1966, pp. 108-110.

Schatzman, C. and Strauss, A., Field Research Strategies for a Natural Sociology, Prentice Hall, Englewood Cliffs, New Jersey, 1973.

Shearer, William J., The Grading of Schools, H. P. Smith Publishing, New York, 1899.

Shopski, Mary K., "Ungraded Primary Reading Program: An Objective Evaluation," Elementary School Journal, 61, October, 1965.

Slavin, R. E., "Cooperative Learning and the Cooperative School," Educational Leadership, 45(3), 1987, pp. 7-13.

Slavin, R. E., "Ability Grouping and Student Achievement," Review of Educational Research, 57, 1987, pp. 293-336.

Slavin, R. E., "Cooperative Learning and Student Achievement," School and Classroom Organization, Erlbaum, Hillsdale, New Jersey, 1988.

Stainback, W., and Stainback, S., "A Rationale for the Merger of Special and Regular Education," Exceptional Children, vol. 52, 1984, pp. 102-111.

Stainback, W.; Stainback, S.; Courtnage, L.; and Jaben, T., "Facilitating Mainstreaming by Modifying the Mainstream," Exceptional Children, vol. 51, 1985, pp. 144-152.

Taylor, P. H., "How Teacher Plan Their Courses: Studies in Curriculum Planning," London, 1970.

Taylor, P. H., "A Study of the Curricular Influences in a Mid-western Elementary School, unpublished manuscript. Teaching Resources, University of Birmingham, 1974.

Taylor, P. H. and Reid, W. A., "A Study of the Curricular Influence System," Journal of Education Research, 1971, pp. 1-23.

Tewksbury, John L., Nongrading in the Elementary School, Charles Merrill Books, Columbus, Ohio, 1967.

Tyler, L.E., Reorganizing American Public Education, EDRS, Eugene, Oregon, 1985, p. 7.

Veenman, Simon, "Classroom Time and Achievement in Mixed-age Classes, Educational Studies, vol. 13, no. 1, 1987, pp. 75-84.

Villa, Richard and Thousand, Jacqueline, "Enhancing Success in Heterogeneous Classrooms and Schools: The Powers of Partnership," Teacher Education, Fall, 1988, vol. 11, no. 4, pp. 144-54.

Villa, Richard, "Administrative Supports Which Promote the Education of All Students in the Mainstream," University of Vermont Press, Burlington Vermont, 1989.

Wakefield, Alice, "Multi-age Grouping in Day Care," Children Today, vol. 8, no. 3, May-June, 1979, pp. 26-28.

Wallace, Richard C., Jr., "Can Large Group Instruction Provide for Individual Differences?" The National Elementary Principal, 44, January, 1965, pp. 66-70.

Way, Joyce, "Achievement and Self-concept in Multi-age Classrooms," Educational Research Quarterly, vol. 6, no. 2, 1981, pp. 69-75.

Weber, Lillian, The English Infant School and Formal Education, Prentice Hall, Englewood Cliffs, New Jersey, 1971, pp. 62-66.

Wiersma, William, "Individually Guided Education: An Alternative Form of Schooling." Paper presented at the annual meeting of the American Educational Research Association (67th), San Francisco, California, April, 1986.

Yates, Alfred, Grouping in Education, UNESCO Institute of Education, Oxford, England, Wiley & Sons, London, 1966, pp. 70-71.