DOCUMENT RESUME

ED 414 086 PS 026 099

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TITLE Mixed-Age Grouping in Kindergarten: A Best Case Example of Developmentally Appropriate Practice or Horace Mann's Worst Nightmare?
PUB DATE 1997-11-00
NOTE 140p.; Master's Research Practicum, Malone College.
PUB TYPE Dissertations/Theses - Practicum Papers (043)
EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS Comparative Analysis; *Kindergarten Children; *Mixed Age Grouping; *Preschool Teachers; Primary Education; Private Schools; Public Schools; Surveys; *Teacher Attitudes
IDENTIFIERS Developmentally Appropriate Programs

ABSTRACT

This practicum study examined kindergarten teachers' perspectives regarding mixed-age groupings that included kindergarten students. The study focused on pedagogical reasons for using mixed-age grouping, ingredients necessary for successful implementation of a multiage program that includes kindergartners, and the perceived effects of a multiage program on kindergartners. Participating were 48 public and private school kindergarten teachers from Ohio and Kentucky who taught in multiage settings. Questionnaire results indicated that teachers believed schools implemented multiage programs because they viewed them as benefiting children; encouraging appropriate, student-centered, practices; reducing pressures for competition; developing peer learning; facilitating flexible student pacing; and promoting a family-like climate. Necessary components for successful implementation of mixed-age grouping included developmental curricula, pre-implementation discussions, parental knowledge and support, ongoing staff development, a supportive administration, and visits to existing multiage programs. Identified benefits for students included the child focus, acceptance of children's uneven development, the level of cooperation, older children acting as models for younger, and improvement in self-esteem, social and leadership skills, language. There were private-public school teacher differences in the concerns presented for kindergartners in mixed-age classrooms, with private school teachers more likely than public school teachers to have no concerns regarding making older children appear less capable than younger, lack of challenge for older children, developmental differences among students, older children feeling exploited when younger ones' ask for help, or younger children feeling intimidated by older classmates. (The survey is appended. Contains 34 references.) (Author/KB)

Mixed-Age Grouping in Kindergarten:

A Best Case Example of Developmentally Appropriate Practice

or Horace Mann's Worst Nightmare?

A Research Practicum

Presented to

The Graduate Faculty of Malone College

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

Patricia M. Tercek

November, 1997

ACKNOWLEDGMENTS

I wish to sincerely thank Dr. Maxine Burgett for going above and beyond the call of duty as a research advisor. It is rare to find individuals nowadays who so freely share their knowledge with others; Dr. Burgett is one of these uncommon souls. She selflessly gave of her time to assist in bringing this research project to fruition. We began the research process as student and advisor. It is with a tremendous amount of thanks and pride that I now consider us colleagues and friends.

This study is dedicated to my husband, Luke, and our children, Nicole and Brandon. Many people have dreams, but few are able to realize them in their lifetime. How blessed I am to have a family who was willing to help me fulfill my dream. Luke, thank you from my heart. Flowers have the sun and I have you.

ABSTRACT

This research examined mixed-age groupings that included kindergarten students. The pedagogical reasons for using mixed-age grouping in early childhood settings were examined, along with identifying the ingredients necessary for successful implementation of a multiage program that includes kindergarten students. Also of interest were the effects of a multiage program on kindergarten students.

The subjects of this research were 48 public and private school kindergarten teachers from Ohio and Kentucky who taught in a multiage setting. Each subject answered a questionnaire that consisted of five parts. The first part asked for demographic information. The second part was a rating of the pedagogical reasons each school had for implementing a mixed-age program that included kindergarteners. In the third part, the subjects rated the components necessary for successful implementation of a quality mixed-age program. In the fourth and fifth parts of the survey, the subjects were asked to rate positive and negative impacts a multiage grouping had on their kindergarteners.

The research design was survey research used for a descriptive purpose and in an explanatory way. Descriptive statistics were used to summarize the demographic characteristics of the respondents. A series of histograms was compiled and analyzed to adequately explore the results of the research. A narrative highlighted significant aspects of this data.

This study demonstrated that mixed-age grouping in early childhood education should be considered as a technique for providing effective, developmentally appropriate education for young children. In reviewing this study's findings, it became clear that a majority of educators who currently teach in a multiage program consider it beneficial to young children. It was concluded from the research conducted that multiage grouping of young children works.

TABLE OF CONTENTS

CHAPTER Page

CHAPTER Page

III. PROCEDURES (Continued)

CHAPTER Page

CHAPTER Page

CHAPTER Page

CHAPTER Page

CHAPTER Page

CHAPTER Page

LIST OF FIGURES

FIGURE Page

FIGURE Page

FIGURE Page

CHAPTER I

THE PROBLEM

Introduction

The true merit of mixed-age grouping in early childhood education is clearly seen in the following example by Katz, Evangelou, and Hartman (1990):

> A group of four- and five-year-olds greets [sic] the arrival of new manipulative materials with great interest. Included are plastic chain links. . . . The older children begin linking pieces together, stretching the linked units from one end of the room to the other. They soon move on to counting how many of each shape are in the chain. Next, they start taking actual measurements of its length. The younger children continue joining various pieces together. During subsequent days, as the older children move on to labeling different shapes and cataloging them, the younger ones begin counting, measuring, and keeping records of their findings, just as they had seen their older classmates do earlier in the week. (p. vii)

These children are simply learning from one another. As Gutloff (1995) pointed out, "children did not think multiage grouping was all that unusual. Their classroom had just caught up with the rest of their lives" (p. 22).

Mixed-age, or multiage, grouping is defined as "placing children who are at least a year apart in age into the same classroom groups" (Katz et al., 1990, p. 1). Mixed-age grouping is not new to education in the United States. The one-room schoolhouses of years past were nongraded groupings established as a direct result of economic and geographic factors (Bacharach, Hasslen & Anderson, 1995).

Today, a growing trend is occurring toward again using mixed-age groupings in schools (Feng, 1994). In current multiage settings, the child's developmental needs, regardless of grade-level curriculum, are the main defining traits of the mixed-age concept. Ideally, as Miller (1994) pointed out, "grade- and age-level distinctions are blurred as the students blend into a caring community of learners" (p. 2). In mixed-age groupings, teachers teach to the needs of the individual students and therefore, are better able to resist what Katz et al. (1990) called "the 'push down' phenomenon: the trend to introduce the primary school

curriculum into kindergarten and preschool classes" (p. 4).

In 1987, the National Association for the Education of Young Children (NAEYC) expressed concern about the increased emphasis on formal instruction in teaching academics in early childhood programs. This educational practice resulted from various factors including parents' demands for better education, as well as a national outcry for school and teacher accountability and excellence. In 1987, the NAEYC published the landmark book, Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8, to promote educational programs and strategies based on how young children develop and learn. According to the NAEYC

> A high quality early childhood program provides a safe and nurturing environment that promotes the physical, emotional, and cognitive development of young children. . . . A major determinant of program quality is the extent to which knowledge of child development is applied in program practices. . . . It is the responsibility of the educational system to adjust to the developmental needs and levels of the children it serves;

children should not be expected to adapt to an inappropriate system. (pp. 1 & 13)

Developmentally appropriate practices recognize that children grow and develop at different, varying rates and instructional practices should address all the needs of each child. This means "developmentally appropriate schools are flexible in their expectations about when and how children will acquire certain competencies" (Bredekamp, 1987, p. 65). The developmentally appropriate practices expounded by the NAEYC form the foundation, not only for outstanding early childhood education programs, but also for multiage classrooms.

Rationale for the Study

Astute observers of young children know children learn by doing and from interacting with one another. When children are actively engaged in play and are interacting with each other, age is usually not a factor (McLain, Heaston, & Kitchens, 1995). Researchers (Bacharach et al., 1995; Blackmore, 1996; Katz et al., 1990; McLain et al.) however, have noted that although children are raised in natural, mixed-age settings within their own families, neighborhoods and

communities, most schools group children homogeneously by age, invariably confining interaction to a very narrow age range. Katz et al. perhaps best described the problem of how schools are organized when she stated "although humans are not usually born in litters, we seem to insist that they be educated in them" (p. viii).

Mixed-age grouping in early childhood education needs to be considered as a technique for providing effective, developmentally appropriate education for young children. Traditional classroom organization of students by chronological age or ability, where tracking, narrow definitions of academic ability, teacher-directed learning, performance-based evaluation, and grade retention are typical characteristics, does not adequately meet the needs of most young students today (Bacharach et al., 1995). Several sources (Bacharach et al.; Blackmore, 1996; Bredekamp, 1987; Feng, 1994; Katz et al., 1990) propose mixed-age grouping as a developmentally and individually appropriate educational alternative which seeks to optimize learning by individualizing instruction according to the needs of each child.

The concept of mixed-age grouping in early childhood programs is of

particular concern to this researcher. As a teacher in a school district which piloted a preschool-kindergarten mixed-age classroom, this researcher was eager to gain knowledge about how to successfully implement a multiage program.

Statement of the Problem

Although a great deal of research has been done detailing the benefits of nongraded groupings, few researchers have studied the effects of a mixed-age grouping on kindergarten students. This researcher was particularly interested in the effects of a multiage grouping that included kindergarten students in an effort to apply the conclusions drawn to the researcher's teaching situation. The intent of this study was to (a) identify the pedagogical reasons for using mixed-age grouping in early childhood settings, (b) discover the components necessary for successful implementation of a multiage program that includes kindergarteners, and (c) realize the effects of mixed-age grouping on the kindergarten learners.

Research Questions

Two basic questions made up the outline for this study: (a) questions relating to the use of mixed-age grouping and (b) questions relating to the

relationship between mixed-age grouping in early childhood settings and the effects on kindergarten students.

A. Questions relating to the use of mixed-age grouping:

1. Why do schools implement mixed-age grouping in the elementary grades?

2. What ingredients are necessary for successful implementation of a multiage program that includes kindergarteners?

B. Questions relating to multiage grouping in an early childhood setting and its effects on kindergarten students:

1. What are the benefits to kindergarten students in a mixed-age grouping?

2. What are the concerns for kindergarten students in a multiage program?

Delimitations of the Study

Although multiage grouping of students is increasing in use with primary-age students, kindergarten classrooms are often left out of such groupings. In June 1990, Kentucky passed the Kentucky Education Reform Act (KERA) which mandated a complete restructuring of Kentucky's educational

system, including a requirement for all of Kentucky's elementary schools to become nongraded, multiage, multi-ability primary schools by the Fall of 1993 (Institute on Educational Reform, 1994). This legislation helped give greater credence to the developmental appropriateness of using mixed-age groupings with young children.

This study involved public and private school kindergarten teachers who worked in mixed-age classrooms in Kentucky and Ohio. The intent of this study was to glean the professional insight of kindergarten teachers who work with mixed-age groups and that the analysis of the data could impact the use of multiage education in early childhood classrooms.

Terms and Definitions

The following terms and their definitions will lead to a better understanding of this research study.

1. Mixed-age grouping: placing children who are at least a year apart in age into the same classroom groups (Katz et al., 1990, p. 1). Synonymous terms include: multiage grouping or classes, family grouping, and ungraded and

nongraded classrooms.

2. Heterogeneous grouping: the random grouping of students so that groups represent a variety of abilities, gender, race, and socioeconomic levels (Bacharach et al., 1995, p. 73).

3. Homogeneous grouping: the grouping of students who are similar in some trait, usually ability, to decrease differences among the group (Bacharach et al., 1995, p. 73).

4. Developmental appropriateness: a two-dimensional concept dealing with age appropriateness and individual appropriateness. Teachers can use child development knowledge to identify the range of appropriate behaviors, activities, and materials for a specific age group. This knowledge is used in conjunction with understanding about individual children's growth patterns, strengths, interests, and experiences to design the most appropriate learning environment (Bredekamp, 1987, pp. 2-3).

5. Developmentally appropriate practices: a research-based philosophy of how children develop and learn, stressing the need for a balanced perspective on

the whole child in all of his or her complexity (Miller, 1994, pp. 18-19).

6. Peer tutoring: students assisting other students to grasp a concept (Bacharach, 1995, p. 74).

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Almost 150 years after the opening of the first graded school in the United States, the idea of mixed-age grouping in schools is seeing a rebirth (Anderson & Pavan, 1993; Bacharach et al., 1995; Hallion, 1994; Katz et al., 1990). Bacharach et al. pointed to the example set by the states of Kentucky and Oregon, along with the Canadian province of British Columbia, which have each mandated ungraded primary programs in their elementary schools. In Cincinnati, Ohio, education officials want all classes from kindergarten through 10th grade to be multiage by 2001 (Leslie & Halpert, 1996). Every method of grouping children has risks, yet the literature review demonstrated that nongraded classrooms do appear to benefit children (Bacharach et al.; Katz et al.; Miller, 1994).

The review of the literature on mixed-age grouping is organized into three sections. The first section presents an overview of mixed-age grouping, including

the history, theories, and research which support multiage grouping. Section two focuses on the implementation of mixed-age grouping in schools. The effects multiage education has on students is examined in section three.

Overview of Mixed-Age Grouping

History of Mixed-Age Grouping

Multiage grouping is not new to American education. In the early 19th century, one-room schools where one teacher worked with students of various ages was the norm (Anderson & Pavan, 1993; Bacharach et al., 1995; McLain et al., 1995). Bacharach et al. stated there were "196,037 one-room schools in existence in 1918 which typically accommodated 10 to 30 students, ranging in age from 6 to 14" (p. 5). This commonplace multiage grouping of students in schools resulted from geographic and economic factors.

By the mid-19th century, the push for graded schools was being directed by educational leader Horace Mann (Bacharach et al., 1995; Hallion, 1994). After visiting Prussia in 1843 and observing first hand the progressive, efficient, graded Prussian education system, Mann returned to the United States to restructure the

Massachusetts schools in the same age-graded way. In 1848, the Quincy Grammar School in Boston opened as the first graded public school in America.

As the 19th century drew to a close, America was in the midst of the Industrial Revolution. Industrialization caused more people to move into urban areas and public, state-supported education was legislated, increasing the number of students attending school. In order to educate the masses, an economical and efficient model of education was required and graded schools appeared to meet this need.

Bacharach et al. (1995) and Hallion (1994) cited the publication of graded textbooks as another major influence in the establishment of graded education. The McGuffey Readers first published in 1836 provided teachers with expected norms students needed to achieve at various grade levels. More graded texts were published in other content areas, further entrenching the American public schools in a rigid, age-segregated system.

Despite its increasing use in American schools, graded education had its critics. Noted educators and philosophers of the late 19th and 20th centuries who

questioned the appropriateness of graded schools included Friedrich Froebel, John Locke, Johann Pestalozzi, Jean-Jacques Rousseau, Maria Montessori, Benjamin Spock, Anna Freud, and John Holt (Hallion, 1994). Bacharach et al. (1995) and Hallion identified John Dewey, the "father of progressive education," as the greatest critic of graded schools in the 20th century. Dewey established his lab school at the University of Chicago based on the belief that schools were being run too much like factories, expecting each child to be a carbon copy of the children around him, and should not be organized by childrens' ages. Dewey eliminated the placement of students into grades according to their age, and instead placed students together by how they learned best. Unfortunately for supporters of multiage education, Dewey's school was isolated in its practices and not widely replicated (Bacharach et al.).

By the late 1800's, graded schools had been widely adopted throughout the United States, especially in large cities, and this same structure is still used to define most American schools today. Is the gradedness of American schools still effective? Perhaps, yet Hallion (1994) posed a thought-provoking question for

educators to consider: The graded system of the 1860's "looked very much like it looks today. However, does the rest of society look the way it looked during the time of the Civil War?" (p. 4).

Theories Behind Multiage Grouping

Multiage education is rooted in a number of theoretical and philosophical frameworks which respect children's growth and development as unique and very individual (Bacharach et al., 1995). Bacharach et al. cited five major educational theories which support mixed-age grouping in education: cognitive theory, social learning theory, sociocultural theory, psychosocial theory, and ecological theory. It is interesting to note how each theory supports individualized and child-directed learning, which are the cornerstones for mixed-age groupings.

Piaget's cognitive theory views children as active constructors of their own learning which is a dynamic process, experiential, and maturational (Bacharach et al., 1995). In multiage settings, teaching is individualized and interactions with peers helps to broaden perspectives and develop social skills.

Social learning theorists see development as the product of social learning

through observation, imitation, and identification with others (Bacharach et al., 1995). Applying this theory to nongraded classrooms, younger students have many opportunities to observe and emulate older children and enhance their social development through these observations (Mounts & Roopnarine, 1987).

Vygotsky also focused on the social aspect of children's learning through observing others, but his sociocultural theory additionally stressed the importance of each child's zone of proximal development, the distance between the child's actual and potential developmental level facilitated in collaboration with others (Bacharach et al., 1995; Katz et al., 1990). In mixed-age classrooms, peers work together and stimulate each other's thinking and cognitive growth (Dever, Zila, & Manzano, 1994; Katz et al.).

The psychosocial theory developed by Erikson proposed that people will face many psychological and social challenges as they develop and it is important they resolve the conflicts of each developmental stage in a positive manner (Bacharach et al., 1995). Multiage education benefits students because it permits them to practice working through developmental conflicts with different-age peers.

In the ecological theory, Bronfenbrenner viewed the environment as a nested system of interrelationships where development occurs as a result of child-society interrelationships (Bacharach et al., 1995). Nongraded classrooms reflect a real, diverse world, giving the children the chance to develop strong interrelationships between school, home, and society.

It is important for early childhood educators to be informed about the theoretical support that exists for multiage education (Bacharach et al., 1995). This knowledge helps multiage teachers of young children proceed confidently with curriculum development consistent with a multiage philosophy, knowing their work is grounded in established educational theories.

Research Supporting Mixed-Age Groupings

Anderson and Pavan (1993) and Katz et al. (1990) propose that the time is right for looking at nongraded schools as a viable option for educating children since research tends to overwhelmingly support multiage education as beneficial to young children. Much research (Anderson & Pavan; Bacharach et al., 1995; Katz et al.; Mounts & Roopnarine, 1987) has concluded that interactions between

younger and older children often facilitate and enhance social and cognitive development for all the individuals involved. The range of abilities and competencies within a mixed-age group creates opportunities for collaboration, peer tutoring, and cooperative learning (Katz et al.)

One of the best known examples of multiage education has been practiced for over thirty years in Montessori programs throughout the world. Maria Montessori based her philsosphy of educating young children on a deep respect for the child (Morrison, 1995). Inherent in the Montessori system is an individualization of education for each child; children are encouraged to learn at their own pace and from each other. Montessori classrooms always have children of different ages, usually between three- and six-years-old. In describing the Montessori schools, Morrison stated the "advantages of mixed-age groups are that children learn from one another and help each other, a wide range of materials is available for all children, and older children become role models and collaborators for younger children" (p. 107).

Connell (1987) discussed two other successful international examples of

grouping young children. After World War II, British primary schools were created with new social patterns where classes were called family groupings. Children were put into three-year groups (ages 4-5-6, 5-6-7, 6-7-8) and stayed with the same teacher for several years. Older children moved on to a new grouping when they showed readiness to do so; the younger children would then become the senior group members helping to teach the "new" younger ones.

In New Zealand schools, Connell described how children are permitted to enter school anytime during the school year on their fifth birthday. Forward movement is at an individual child's own pace and achievement; there is no skipping and no failure. Differences are expected and celebrated in New Zealand schools.

Another successful example of age and grade grouping of young children can be seen in the schools of Reggio Emilia in northern Italy. Reggio Emilia is an affluent northern Italian city that has been operating a high-quality, early childhood education program for the last fifty years. Named as one of the ten best schools in the world by Newsweek (1991), the Reggio Emilia schools have been receiving international acclaim as a "collection of schools for young children in which each

child's intellectual, emotional, social, and moral potentials are carefully cultivated and guided" (Edwards, Gandini, & Forman, 1993, p. x).

Reggio schools have a unique philosophy which perceives the education of each child as an entire community's responsibility. There are a number of elements which contribute to the Reggio Emilia approach including (a) collaboration among all the adults involved in a child's work, (b) extensive documentation of children's work, (c) incorporation of an art specialist at each school, (d) project work, and (e) three-year grouping of children (Katz, 1994). According to Katz, the fact that Reggio children stay with the same teachers during their three years in schools provides a variety of benefits to the children. The Reggio teachers have been educating young children for fifty years and have demonstrated that the practice of grouping children across age levels together for an extended period of time is extremely beneficial.

After conducting a detailed analysis of multiage research studies published between 1968 and 1990, Anderson and Pavan (1993) concluded that nongraded schools were favored over graded schools for higher academic achievement,

improved chances for good mental health, and positive attitudes toward school. Anderson and Pavan also found educational programs based on characteristics of gender, ethnicity, language, social and economic status have been unsuccessful due to the variation within each group. The research findings of Mounts and Roopnarine in 1987 supported the fact that grouping children in narrow age ranges seems unwise, given that multiage classrooms more closely resemble the social structure in which children grow up with at home. Mounts and Roopnarine found that younger children in a mixed-age grouping were more likely to engage in more mature levels of play than their same-age peers in a same-age classroom.

Past research has done much to increase the use of mixed-age groupings in early childhood settings. Early childhood professionals can confidently develop appropriate curriculum and teaching strategies for multiage grouping in the early years. However, Katz et al. (1990) stated that research must continue to be done in the area of mixed-age grouping in early childhood education to maintain support for this educational practice.

Implementation of Mixed-Age Grouping

Pedagogical Reasons

Mixed-age grouping in early childhood settings has received much renewed interest since the 1987 landmark publication of Developmentally Appropriate Practices in Early Childhood Programs Serving Children From Birth Through Age 8 by the National Association for the Education of Young Children (NAEYC). The NAEYC responded to the increased, and inappropriate, emphasis on academics in kindergarten by outlining the characteristics of developmentally appropriate practices. Developmental appropriateness is composed of two dimensions, age appropriateness and individual appropriateness. The position of the NAEYC is that a high quality early childhood program promotes the development of young children physically, emotionally, socially, and cognitively in a safe, nurturing environment (Bredekamp, 1987). Each child has his own unique pattern and timing of growth. By applying this knowledge of child development to program practices, educators will be determining the program's quality and the degree to which the program is developmentally appropriate.

The NAEYC (1987) supports the use of mixed-age grouping in developmentally appropriate early childhood settings. According to the NAEYC

> developmentally appropriate schools are also flexible in how they group children. Rigid adherence to chronological age/grade groupings or ability groups is inappropriate. . . .Children are placed where it is expected that they will do their best, which may be in a family grouping and which is more likely to be determined by developmental than by chronological age. . . .Ungraded primary schools provide a vehicle for preserving heterogeneous groups while also providing more time for children to develop at their own pace (pp. 66 & 76).

A number of researchers (Bacharach et al., 1995; Blackmore, 1996; Byrnes, Shuster, & Jones, 1994; Doud & Finkelstein, 1985; Feng, 1994; Katz et al., 1990) have supported the move toward multiage groupings in early childhood settings which embrace the NAEYC guidelines for developmentally appropriate practices. The rigid, age-graded expectations of children in schools is not appropriate for many young children (McLain et al., 1995). Children are born into

naturally occurring mixed-age groupings in their families which throughout human history have informally provided much of children's socialization and education (Katz et al.; Nachbar, 1989). "Grouping children homogeneously on the basis of a single criterion (like age) does not reliably produce a group that is homogeneous on other criteria relevant to teaching and learning" (Goodlad & Anderson quoted in Katz et al., p. viii). According to Nachbar, children entering preschool have limited school experience and are not even surprised by age range in mixed-age grouping. As pointed out by Surbeck (1992), heterogeneity within a group is valued for the natural learning environment it provides children; a caring learning community is strived for where learners have choices and simultaneously act as supportive experts and curious novices depending on the context.

Another motivating factor behind the use of multiage education in early childhood settings is that young children vary in their rates of intellectual development. " 'There is no unique sequence for all learners, and the optimum in any particular case will depend upon a variety of factors, including past learning, stage of development, nature of the material, and individual differences' " (Bruner

quoted in Anderson & Pavan, 1993, p. 35). Developmentally appropriate, multiage programs recognize the unique way each child learns and permits children to progress through the curriculum at their own rate.

Much concern currently exists over kindergarten entrance age. Adults do not expect the same performance of one-year-olds as of twos, of twos as of threes, etc., yet young five-year-old kindergarteners are expected to perform the same as children who may be more than one year older than themselves (Connell, 1987). A graded school system assumes if a child does not progress satisfactorily, the child failed, rather than that the system failed to meet the child's needs. Multiage education deals with the concerns about kindergarten entrance age by encouraging developmentally appropriate practices and flexible student pacing through the curriculum.

Miller's (1994) rank-ordered comparison of the most frequently mentioned reasons for a school implementing a multiage program have been supported by other researchers (Anderson & Pavan, 1993; Bacharach et al., 1995; Byrnes et al., 1994; Connell, 1987; Feng, 1994; Katz et al., 1990; Veenman, 1995). Miller's

research resulted in the following list of reasons a school may choose to implement a multiage program:

1. Mixed-age groupings benefit children.

2. External forces, such as state legislation or grant funding, result in the implementation of mixed-age grouping of students.

3. Multiage education encourages natural development of the child through developmentally appropriate practices.

4. The continuity of instructional and interpersonal relations across school years for students, teachers, and parents is increased.

5. Flexible student pacing is encouraged with mixed-age classrooms.

6. Peer learning and positive peer relations develop in a multiage setting.

7. Teachers want to teach in a mixed-age setting.

8. Multiage classrooms encourage teachers to be more student centered.

9. Mixed-age groupings reduce evaluative and competitive pressures on children (p. 8).

As can be expected, not all the research on the reasons for implementation

of mixed-age groupings has been positive. Byrnes et al. (1994) cited mixed-age classrooms which were established because of uneven enrollment figures, not based on a desire to move philosophically toward the multiage model recommended by the NAEYC. Those involved in such classrooms were overwhelmingly unsupportive of multiage grouping (Byrnes et al.)

Despite the overwhelming support in favor of mixed-age grouping in early childhood settings, more research needs to be done on the grouping of kindergarten-age students with students of other ages. Many preschool settings are comprised of children of different ages, however, this mixed-age grouping practice tends to end at the kindergarten year when children attend a graded elementary school. Further research on the effects of combining kindergarten-age children with children of other ages, both older and younger, could influence the use of this educational practice.

Prerequisites to Success

There is not a definitive model to follow for becoming a mixed-age classroom or school. Just as each child is a unique individual, one multiage

classroom will look different from the next. Each school exists in its own context which must be carefully looked at when planning the move toward nongraded classrooms. However, researchers have cited certain elements which should be present in a quality mixed-age program.

First and foremost, administrators and teachers must proceed slowly by taking adequate time to plan for the implementation (Bacharach et al., 1995; Gutloff, 1995; Miller, 1994; Oregon State Department of Education, 1994; Surbeck, 1992). The entire school community must have a strong philosophical commitment to the concept. In addition, educators need to adequately communicate their working knowledge of ungradedness to parents. Teachers must receive adequate training and ongoing development in early childhood education and mixed-age grouping.

Once the program is well thought out, support must be developed and maintained among teachers, administrators, and parents (Bacharach et al., 1995; Katz et al., 1990; Miller, 1994). This support starts with making parents fully aware of the program and its benefits, along with involving parents as much as

possible in the planning of the program (Bacharach et al.; Brewer & Jardine, 1994; Byrnes et al., 1994; Katz et al.). In planning a multiage program, educators must design a developmental curriculum around the specific needs of the individual child (Bacharach et al., Connell, 1987; Friedman & Koeppel, 1990). Such child-centered, process-oriented classrooms encourage children to develop at their own pace and gives them the chance to work collaboratively on a variety of activities.

Implementation of any program change does take time. Everything will not fall into place overnight. Educators willing to implement mixed-age grouping of their students must spend time getting ready. Teachers of multiage classes must be articulate and knowledgeable about why they are pursuing such a program. They can then proceed confidently with the assurance that nongraded education facilitates a developmentally appropriate learning environment which ultimately benefits children.

Effects of Mixed-Age Grouping on Students

Benefits

The research reviewed was extremely supportive of multiage education for young children. Mixed-age groupings tend to reflect real life in their composition.

In a 1996 study comparing multiage to graded classrooms, Blackmore found no significant difference in achievement between mixed-age and traditional graded groupings. However, in the same study, Blackmore found overwhelming support for mixed-age grouping because of the positive effects on achievement, attitude toward school, self-concept as a learner, future aspirations, self-esteem, social skills development, leadership development, reduced aggression, pro-social behaviors, attendance, anxiety, and positive effects on parents.

In 1992, Katz presented a rationale for using mixed-age grouping with young children. Katz pointed out that early childhood settings which employ mixed-age groupings, tend not to segregate children by readiness or age, but rather teach to the needs of each child. In such classrooms, Katz felt educators and peers tend to accept a wider range of behaviors; cooperation rather than competition is

the norm. In nongraded classrooms more capable students often assist less able peers, thereby modeling leadership skills and pro-social behaviors for younger children.

In a 1995 study, McLain et al. chronicled the efforts of a teacher beginning a multiage classroom of children ages five to eight. McLain et al. concluded that:

1. The program allows children to learn from their peers in a social setting through peer modeling, peer tutoring, and communication.

2. The program reduces academic problems such as retention or transition classes as children stay for several years with one teacher.

3. The program enables students to progress at an individual rate without regard to age or grade.

4. The program highlights the importance of developing the 'whole' child.

5. The program implements the use of small groups and project activities, encouraging cooperative behaviors over competitive ones.

6. The program allows children of different levels of cognitive development to interact with one another.

7. The program seems to develop positive attitudes toward school (p. 88).

As evidenced by the ground breaking work of numerous professionals (Brewer & Jardine, 1993; Friedman & Koeppel, 1990; Gutloff, 1995; Katz et al., 1990; McLain et al.; McClellan & Kinsey, 1996; Miller, 1994; Roopnarine & Johnson, 1983; Veenman, 1995) research supports multiage education in early childhood settings. The rigid age-graded expectations of young children in schools is not developmentally appropriate for young learners (Bredekamp, 1987; Katz et al.; McLain et al.). Ongoing investigation could identify elements that impact the grouping of children across age levels in early childhood programs.

Concerns

Whenever changes in practice or curriculum are being considered, there are potential risks as well as advantages to consider and discuss. Pertinent to this research are six potential hazards Katz (1996) felt must be addressed when using mixed-age grouping with young children:

1. Older children may not be sufficiently challenged.

2. Older children may be exploited by younger ones' persistent calls for

help.

3. Older children may become overbearing or bossy with younger ones.

4. Younger children might feel overwhelmed or intimidated by their larger and more experienced classmates.

5. Younger children may become acutely aware of their own limitations compared to older classmates.

6. Older children may assume that since younger children cannot do some things for themselves, the older ones must take over the situation (pp. 4 & 5).

In each instance, the teacher sets the stage. Many of these aforementioned hazards can occur in a traditional graded classroom as well. Educators must be responsible for monitoring and observing what is happening in the classroom so that each child's educational experience is a positive one. It is the astute professional who works with the students to discuss potential problems and deals with them cooperatively before they become insurmountable. Mixed-age grouping is not a panacea for the problems facing today's schools. Yet it is an educationally

sound method of grouping children for instruction in a way that addresses each child's developmental uniqueness.

Summary of the Literature

After close examination of the available literature on the use of mixed-age grouping, it was clear that this is a pedagogically sound and developmentally appropriate practice. The use of mixed-age groupings with young children has been supported by the NAEYC (1987) and many well known contemporary early childhood professionals including Robert Anderson, Susan Bredekamp, Lillian Katz, and Barbara Pavan. Research overwhelmingly supports the use of multiage education as advantageous for young children (Bacharach et al., 1995; Blackmore, 1996; Brewer & Jardine, 1993; Feng, 1994; Friedman & Koeppel, 1990; Gutloff, 1995; Katz et al., 1990; McClellan & Kinsey, 1996; McLain et al., 1995; Miller, 1994; Roopnarine & Johnson, 1983; Veenman, 1995). The implementation of mixed-age groupings in early childhood settings makes sense as a developmentally appropriate practice which meets the needs of children.

CHAPTER III

PROCEDURES

The topic areas covered in this section include: (a) a description of the subjects, (b) the variables under investigation, (c) the general and specific research questions developed, (d) the research methodology, (e) the instrument used, (f) the data collection procedures, (g) analysis of the data, and (h) limitations of the study.

Description of the Subjects

The subjects for the study were 48 public and private school kindergarten teachers from the states of Ohio and Kentucky who taught in a multiage setting. Of the 75 questionnaires distributed, 48 (64%) were returned. Forty-one of the respondents taught in a public school and seven taught in a private school. All 48 respondents had college degrees with 20 holding Bachelor's degrees and 28 earning Master's degrees.

The 41 public school teachers represented a broad age range. One of the respondents was under 25 and one was at least 60 years old. Twenty-three

respondents were between ages 25-39 and 16 were between ages 40-59.

The years of teaching experience for the 41 public school respondents ranged from 1-1/2 to 24 years (M = 12.2 years). These 41 teachers had taught kindergarten between 1 and 20 years (M = 7.7 years). The number of years of experience teaching in a multiage setting also ranged from 1 to 20 years (M = 5.1 years).

The total class size for the 41 public school teachers ranged from 18 to 87 students (M = 32.5). The respondent who reported having 87 students taught in a team teaching situation with two other teachers in the room at the same time.The average number of kindergarten-age students in these respondents' classrooms was 17.6 students and the average number of students of another age was 14.9 students. Of the public school respondents, 20 were in team teaching situations and 21 were not.

Grouping kindergarten-age students with traditional-aged 1st-grade children was the most popular multiage format with 30 of 41 public schools grouping their students in this manner. Four schools grouped their

kindergarten-age students with a combined 1st-2nd or 2nd-3rd grade class, while two other schools grouped their kindergarten children with prekindergarteners. In two schools the kindergarteners were taught in a combined K through 3rd-grade grouping. Three respondents did not give this information.

Six of the seven respondents who taught in a private setting were female and all seven were age 40 or older. Of the private school respondents, six taught in a Montessori school.

The seven private school teachers had been teaching between 4 and 28 years ($\underline{M}$ = 12.2 years). These teachers had taught kindergarten between 4 and 18 years ($\underline{M}$ = 10.2 years). The number of years of experience teaching in a multiage setting ranged from 4 to 28 years ($\underline{M}$ = 13.1 years).

The total class size for the seven private school teachers ranged from 20 to 40 students ($\underline{M}$ = 27.3). The average number of kindergarten-age students in these respondents' classrooms was 10 students and the average number of students of another age was 17.3 students. Five of these teachers team taught and two did not.

In the seven private school settings, the kindergarten-age children were all grouped with younger children, ranging in age from 2-1/2- to 4-years-old. In three of the settings, the kindergarten-age students were grouped with children ranging from ages 3 to 7.

Variables Under Investigation

This researcher chose the following variables for study:

1. The pedagogical reasons for implementation of mixed-age grouping of kindergarten students.

2. The practices elementary schools and teachers employ which lead to successful implementation of a mixed-age program for kindergarten students.

3. The effects of mixed-age grouping on kindergarten students.

Research Questions

Based on the statement of the problem, the following research questions were developed.

General Research Question 1:

Why do elementary schools implement mixed-age grouping for

kindergarten students?

Specific Research Questions 1A-1I:

1A: How important is the benefit to children?

1B: How important is the encouragement of appropriate practices?

1C: How important is the encouragement of teachers to be more student-centered?

1D: How important is the reduction of competitive pressures on children?

1E: How important is the development of peer learning?

1F: How important is the facilitation of flexible student pacing?

1G: How important is the promotion of a family-like climate?

1H: How important are external forces such as state legislation or grant funding?

1I: How important are enrollment figures?

General Research Question 2:

What ingredients are necessary for successful implementation of mixed-age

grouping?

Specific Research Questions 2A-2I:

2A: How important is a developmental curriculum designed around the needs of specific children?

2B: How important are pre-implementation discussions?

2C: How important is parent knowledge and support?

2D: How important is training for teachers in multiage philosophy?

2E: How important is on-going staff development?

2F: How important is time allotted to teachers to collaborate, plan, and share ideas?

2G: How important is the pace of implementation?

2H: How important is a supportive administration?

2I: How important are teachers' visits to existing multiage programs/sites?

General Research Question 3:

What benefits are there for kindergarten students in a mixed-age

classroom?

Specific Research Questions 3A-3J

3A: How does focus on the child and child-centered learning rate in importance as a kindergarten student benefit?

3B: How does acceptance of children's uneven developmental levels rate in importance as a kindergarten student benefit?

3C: How does cooperation outweighing competition rate in importance as a kindergarten student benefit?

3D: How does the modeling of older children for younger ones rate in importance as a kindergarten student benefit?

3E: How does the improvement of self concept and self esteem rate in importance as a kindergarten student benefit?

3F: How does the improvement of social skills rate in importance as a kindergarten student benefit?

3G: How does the development of leadership skills rate in importance as a kindergarten student benefit?

3H: How does the improvement of language development rate in importance as a kindergarten student benefit?

3I: How does the avoidance of tracking rate in importance as a kindergarten student benefit?

3J: How does the avoidance of retention rate in importance as a kindergarten student benefit?

General Research Question 4:

What concerns arise for kindergarten students in a mixed-age classroom?

Specific Research Questions 4A-4E:

4A: How does the combination of older and younger children, which may make older children appear less capable, rate in importance as a concern teachers have for kindergarten students?

4B: How does the insufficient challenge older children may feel rate in importance as a concern teachers have for kindergarten students?

4C: How do developmental differences among students rate in importance as a concern teachers have for kindergarten students?

4D: How does the exploitation older children may feel by younger ones' persistent desire for help rate in importance as a concern teachers have for kindergarten students?

4E: How does the intimidation younger children may feel from older classmates rate in importance as a concern teachers have for kindergarten students?

Research Methodology

Quantitative nonexperimental research was used in this study. The research design chosen was survey research used for a descriptive purpose and in an explanatory way. "In survey research the investigator selects a sample of respondents and administers a questionnaire or conducts interviews to collect information on variables of interest. The data that are gathered are used to describe characteristics of a certain population....and delineate reasons for

particular practices" (McMillan & Schumacher, 1997, p. 296 & 398). Descriptive survey designs produce information on existing groups without creating new groups (Fink, 1995). Furthermore, Berdie and Anderson (1974) point out a number of advantages in using a questionnaire to conduct research, including low costs to administer, ability to collect data from a sample in a short period of time, ease of completion, less bias, and ease of tabulation.

This researcher was extremely interested in determining why schools may choose to implement a mixed-age program for kindergarten students and the necessary components of a successful program. The effects of a multiage program on kindergarten students was also under investigation. Thus, to collect this information a survey of this study's subjects was conducted.

Instrument

The research design for this study required surveying public and private school kindergarten teachers who teach in a multiage setting. The teachers surveyed were asked to rate the pedagogical reasons their particular school had for implementing a mixed-age program. The components necessary for successful

implementation of a quality mixed-age program were also rated by the teachers. Finally, the educators involved in the study were asked to rate positive and negative impacts a mixed-age grouping had on their kindergarten students.

Few surveys or questionnaires have been developed which address this study's focus on multiage classrooms at the kindergarten level. Miller (1994) and the Oregon State Department of Education (1994) each developed surveys which addressed the reasons for implementing a multiage program, factors considered important to the successful implementation of multiage instruction, and recommendations for schools considering starting a multiage program. The surveys developed by Miller and Oregon were not used for this research because of their open format. Open questions can be difficult and time-consuming to compare and interpret (Berdie & Anderson, 1974; Fink, 1995; McMillan & Schumacher, 1997).

Since this researcher's purpose in gathering data from kindergarten teachers experienced in teaching in mixed-age settings was to ascertain ways to successfully implement such a program in this researcher's own school, a Likert

scale questionnaire was developed. The questionnaire items were constructed to closely align with the research questions of this study. Each questionnaire item was a statement, rank ordered by the respondents on a scale from *extremely important* to *not important at all.* Demographic questions were also asked of each respondent.

To assure validity, the questionnaire was examined by three colleagues of this researcher who work in the field of education. Educators familiar with the philosophy of mixed-age programs and developmentally appropriate practices were also consulted. These professionals offered contributions to the instrument's development. During the design of the survey, ideas were suggested on ways to develop interesting items relevant to the study's purpose and wording of questions that would carry clear meaning to the respondent. Suggestions were proposed regarding the general appearance of the questionnaire including the use of clip art and lead-in comments to help generate a feeling of personal dialogue between the respondents and the researcher.

Data Collection Procedures

A list was compiled of 75 public and private schools which offered multiage programs for kindergarten students. A week prior to receiving the survey, each participant received a post card (see Appendix A) giving advance notice of the questionnaire's arrival. The questionnaires were mailed out asking for return within two weeks. A cover letter (see Appendix B) was sent with the questionnaire (see Appendix C) to explain the purpose of the research and the questionnaire. Follow-up letters were sent to nonrespondents after a period of two weeks.

To increase the return rate of the questionnaire, a thank you note and bookmark were given to the subjects at the time the questionnaire was mailed to thank them in advance for completing the instrument. All subjects also had the opportunity to be included in a directory listing kindergarten teachers currently implementing a mixed-age grouping. Receipt of this directory would allow their networking with other multiage professionals. Subjects interested in being in the directory needed to fill out a card and return it with their completed questionnaire. This was offered as another motivation to complete and return the questionnaire.

Seventeen (35%) of the 48 respondents requested their name be included in the directory.

To insure confidentiality of all respondents, the return envelopes were coded with a randomly selected two-digit number known only to the researcher. Names, schools and other identifying information of the respondents was not printed in the research results.

The questionnaire consisted of five parts. The first part gathered demographic information from each respondent. The other four parts were Likert scale rank-ordered responses aligned with the research questions of this study.

Data Analysis

Based on the study's findings, the data analysis included both statistical and qualitative analysis. Descriptive statistics were used to summarize the demographic characteristics of the respondents. Qualitative analysis was used to interpret the results of the research.

As the questionnaires were returned, each question's response was tallied according to the ranking given by the respondents. A series of histograms was

compiled and analyzed to adequately explore the study's findings. A narrative highlighted significant aspects of the data. In analyzing the data from specific research questions 1A-1I and 2A-2I, the public and private school teachers were grouped together to illustrate the level of importance in all the subjects' ranking of each specific research question. In analyzing the data from specific research questions 3A-3J and 4A-4E, the data was again portayed showing the respondents' ranking of the question's importance as a benefit or concern, but the histograms were set up to compare the private and public school educators' responses.

Limitations of the Study

The use of a questionnaire developed by the researcher imposed limitations on the study. Determining the instrument's reliability and validity was limited since it was a researcher-created tool. The results were dependent on respondents' completing and returning the questionnaire. Using ranked items on the questionnaire limited this researcher's ability to probe the respondents, although a section for respondents' comments was included after each question. Also, the ranked items may have been ranked by respondents based on personal or

professional bias about the use of mixed-age groupings.

Testing procedure limitations were present because the questionnaire was administered to kindergarten teachers at the beginning of the school year. This was a demanding time of year for teachers and responses may have been influenced by job-related stresses and/or pressures.

The availability of subjects was another limitation of the study. The 27 teachers who did not return the survey may have responded differently than the study's subjects, which would have changed the outcome of the final results. The use of multiage programs for kindergarten children is not widespread. However, this researcher felt it was important to limit respondents to kindergarten teachers who teach in a multiage situation so the special developmental needs of kindergarteners would be addressed.

CHAPTER IV

RESULTS OF THE STUDY

Introduction

The results of the data collected on the implementation and effects of a multiage program on kindergarten students are reported in Chapter IV. This chapter has been organized into four sections. In each section, a general question along with the specific questions pertaining to the general one are addressed.

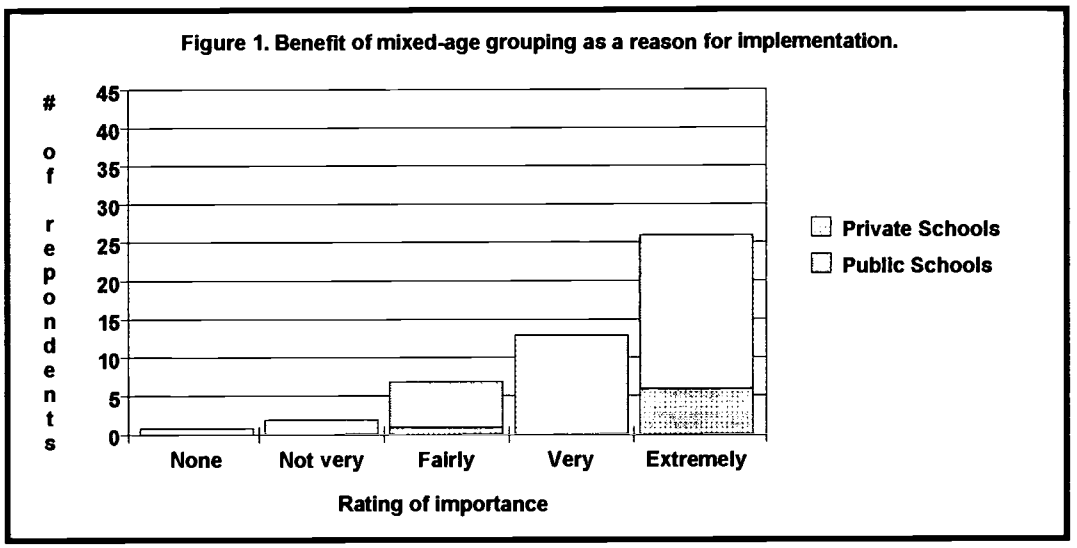
Results of the Research Questions

Results of the Research Questions Pertaining to the Pedagogical Reasons for Implementation of Mixed-Age Grouping of Kindergarten Students

General Research Question 1: Why do elementary schools implement mixed-age grouping for kindergarten students?

The teachers surveyed responded to a series of nine questions pertaining to the reasons schools choose to implement a mixed-age grouping. Figures 1-9 show the responses to Specific Research Questions 1A-1I.

Specific Research Question 1A: How important is the benefit to children?

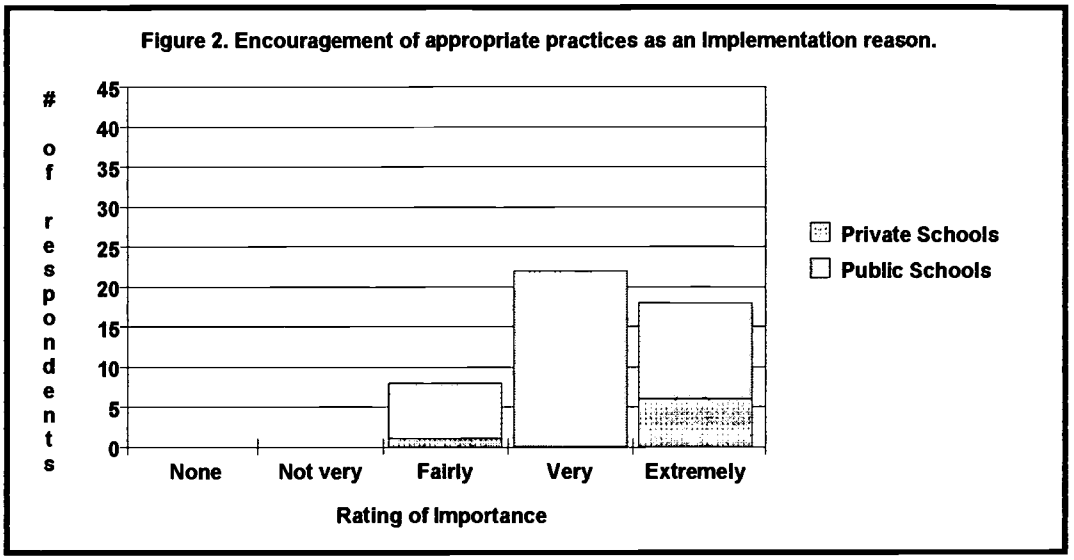


As shown in Figure 1, 45 of the 48 respondents felt the benefit to children was a fairly, very, or extremely important reason in their school's decision to implement a mixed-age program. Only three respondents rated the benefit to children as not very important or not important at all in their school's decision to implement a multiage program.

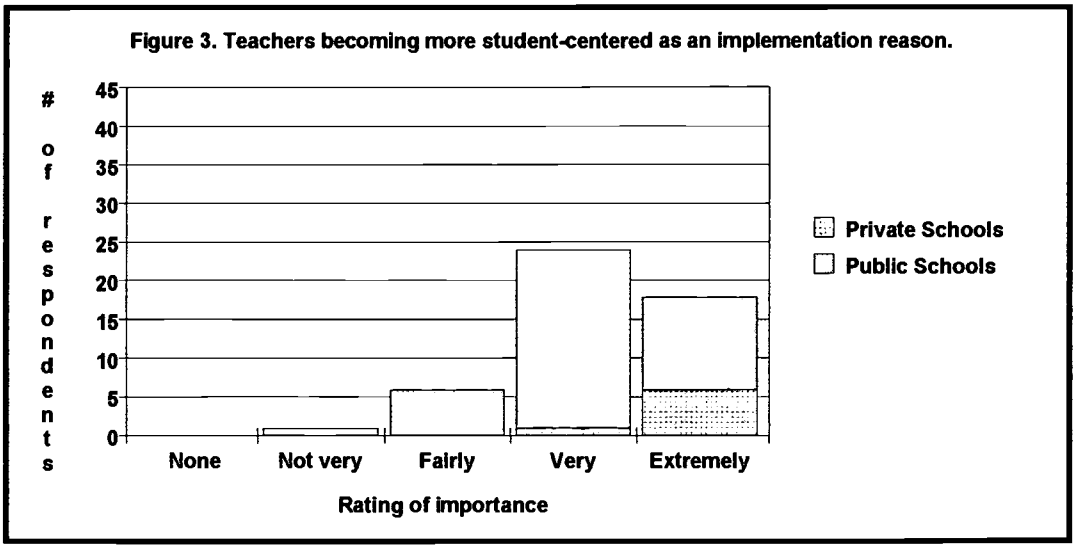
Specific Research Question 1B: How important is the encouragement of developmentally appropriate practices?

All 48 respondents rated the encouragement of appropriate practices as important to some degree in their school's decision to implement a multiage

program (Figure 2). Forty teachers rated it as very or extremely important.



Specific Research Question 1C: How important is the encouragement of teachers to be more student-centered?

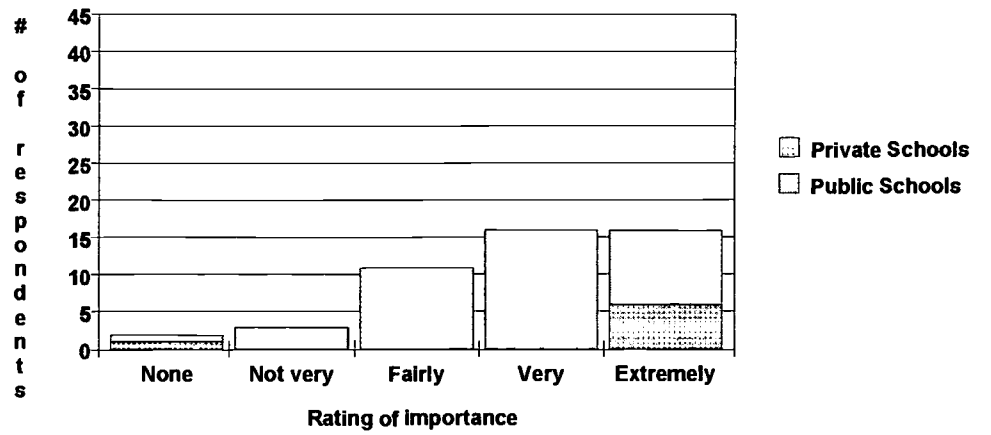


In responding to the statement that mixed-age grouping encourages teachers to be more student-centered, Figure 3 illustrates that 47 of the 48 teachers said this was at least a fairly important reason in the implementation decision. Forty-one respondents rated this as a very or extremely important reason for implementation.

Specific Research Question 1D: How important is the reduction of competitive pressures on children?

The results of this question, presented in Figure 4, show that 88% of the teachers (37 public school teachers and six private school teachers) felt this to be a

Figure 4. Reducing competion for children as a reason for implementation.

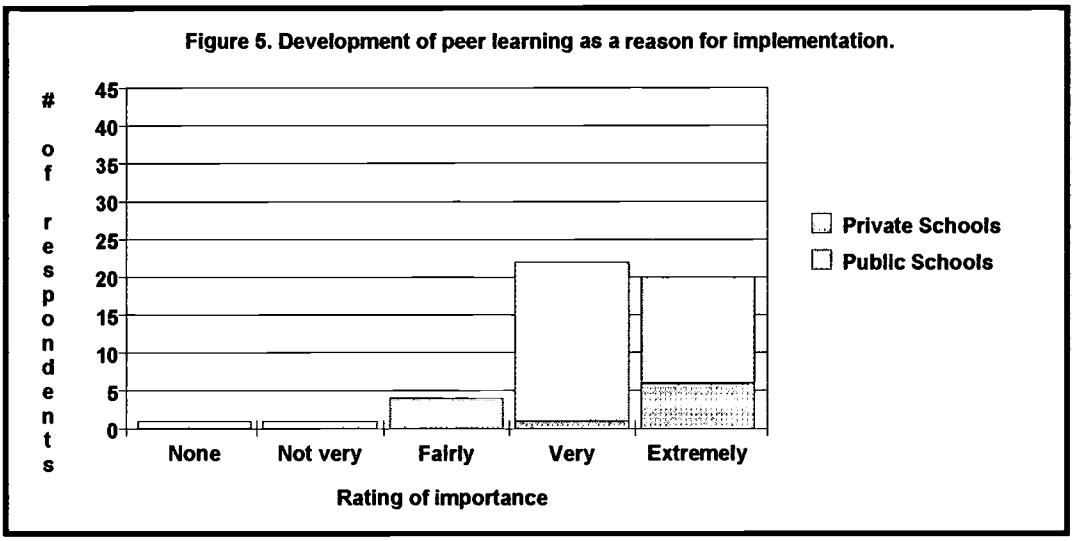


fairly, very, or extremely important reason in their school's multiage

implementation decision. Two educators rated the reduction of competitive pressures on children as not important.

Specific Research Question 1E: How important is the development of peer learning?

Of the total group of 48 respondents, 46 rated the development of peer

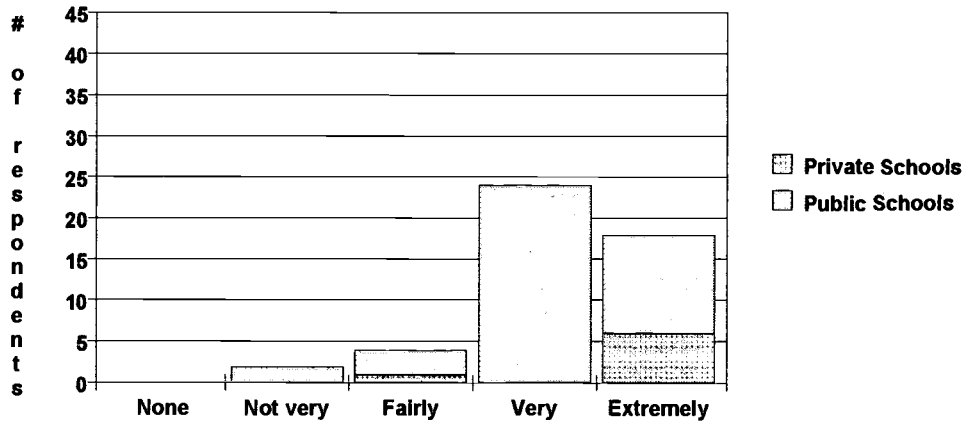


learning as a fairly, very, or extremely important reason in choosing to carry out a mixed-age grouping of students. Two teachers rated this point as not very important or not important at all in the implementation decision (Figure 5).

Specific Research Question 1F: How important is the facilitation of flexible student pacing?

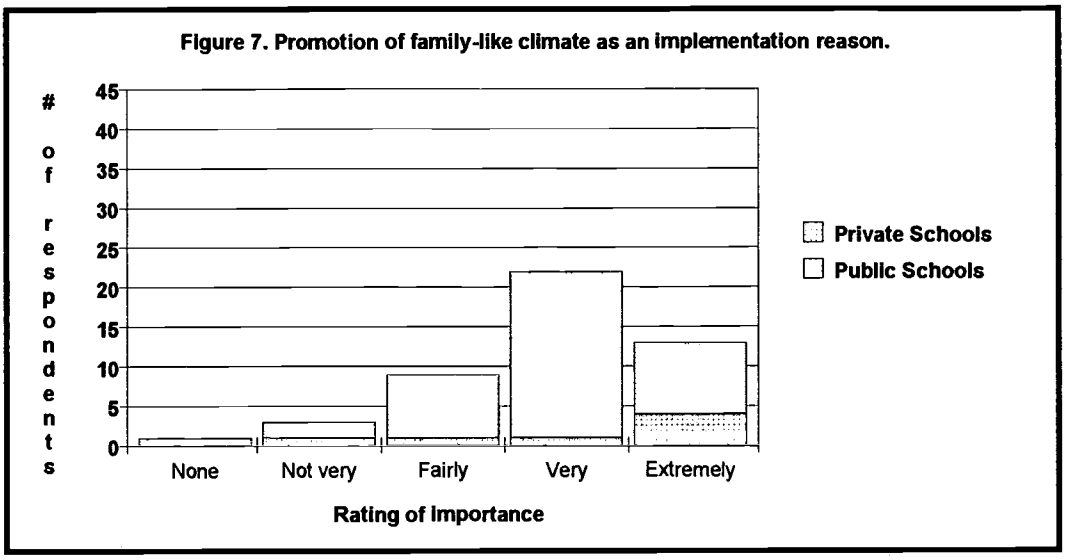
Regarding the facilitation of flexible student pacing, 46 respondents rated this as a fairly, very, or extremely important reason for their school to implement nongraded classrooms. Only two respondents rated this reason as not very important in their school's multiage implementation decision (Figure 6).

Figure 6. Facilitation of flexible student pacing as an implementation reason.



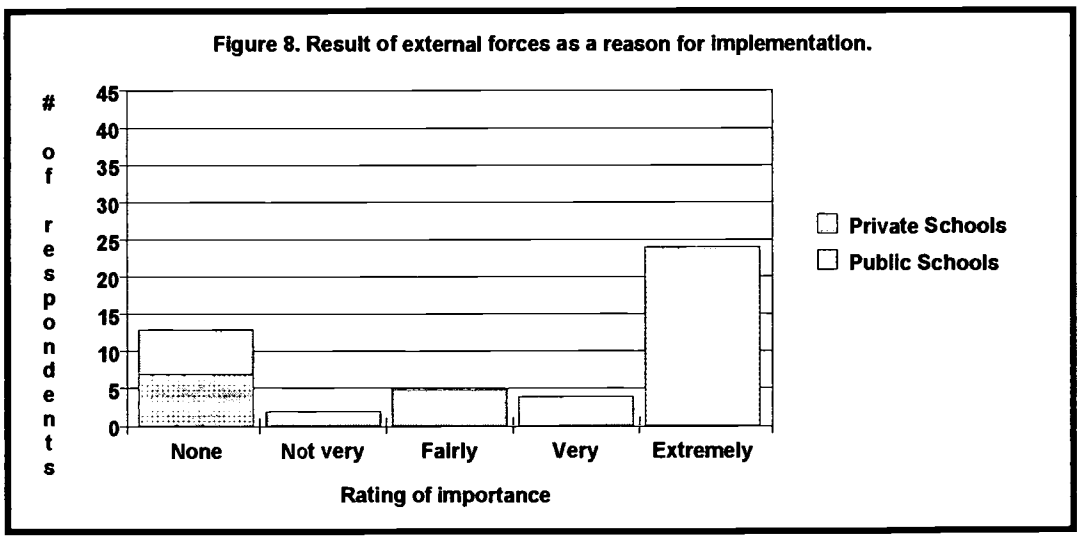
Specific Research Question 1G: How important is the promotion of a family-like climate?

As Figure 7 denotes, 44 respondents perceived the promotion of a family-like climate as important to some degree in their school's decision to implement a multiage program. Four teachers rated this point as not very important or not important at all.



Specific Research Question 1H: How important are external forces such as state legislation or grant funding?

As indicated in Figure 8, the results of this question were spread across the rating scale. Thirty-three public school respondents rated this factor as important

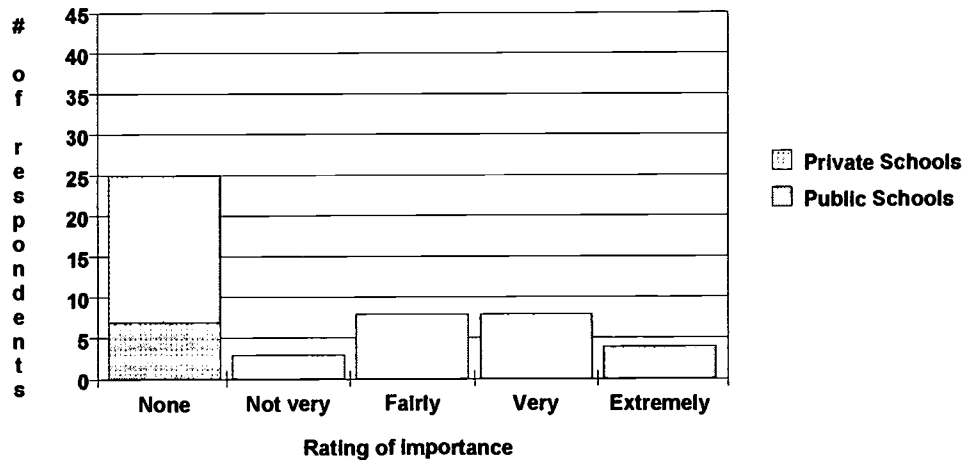


and 24 of these teachers marked this as extremely important, four rated it as very important, and five felt this point was fairly important. This point was not important as a reason in multiage implementation according to the seven private school respondents who returned the survey.

Specific Research Question 1I: How important are enrollment figures?

As shown in Figure 9, the results from this question were divided between important to some degree and of little or no importance. Twenty teachers rated enrollment figures as important to some degree in the decision to use nongraded classrooms. Twenty-eight respondents, including all seven private school teachers, rated this not very important or not important at all in the implementation decision.

Figure 9. Result of enrollment figures as a reason for implementation.



At the end of this first part of the questionnaire, there was a space for the teachers to write in other reasons influential in their school's decision to implement a mixed-age grouping. A number of the Kentucky teachers, but not all, wrote that their school started a multiage program because the 1990 Kentucky Education Reform Act (KERA) legislated mixed-age grouping. Feelings of the Kentucky teachers were mixed as to whether this was the most appropriate arrangement for kindergarteners. Comments by those respondents against ungraded grouping with kindergarteners included "students are weak on a lot of their skills" and "multiage grouping is a mistake in kindergarten and first grade; there is simply too much material, behavioral and social skills that have to be taught to mix up first and kindergarten together."

Supporters from Kentucky of multiage grouping of kindergarten students, despite the fact that it was mandated by law, felt the move helped educators better meet their students' needs. Comments were written stating "our school has modified our arrangements of grades and ages to meet the needs of our individual school" and "implementation, although mandatory, was handled effectively in our school because of a 'pilot' team who worked out the kinks and an excellent

principal who cares deeply." Other reasons respondents wrote that were seen as influential in their school's decision to implement a mixed-age grouping were:

1. Children of different ages would be able to interact socially.

2. Children would be given a chance to be tutored by another child and the tutors would have the opportunity to bloom in their area of strength.

3. Younger children could learn from the older children. Older children would become helpers to younger ones.

4. The staff was interested in initiating the change.

5. Some visited a few multiage rooms and were impressed by the program.

6. Some heard of the benefits and decided to try multiage grouping before state legislation was enacted to give time and flexibility for problem solving that might result.

The private school Montessori teachers who returned the survey and wrote in a comment at the end of the first part of the survey responded that mixed-age grouping is a fundamental element in Montessori education. These respondents stated that multiage grouping in Montessori classrooms is standard practice because of the reasons brought out in Specific Research Questions 1A-1I.

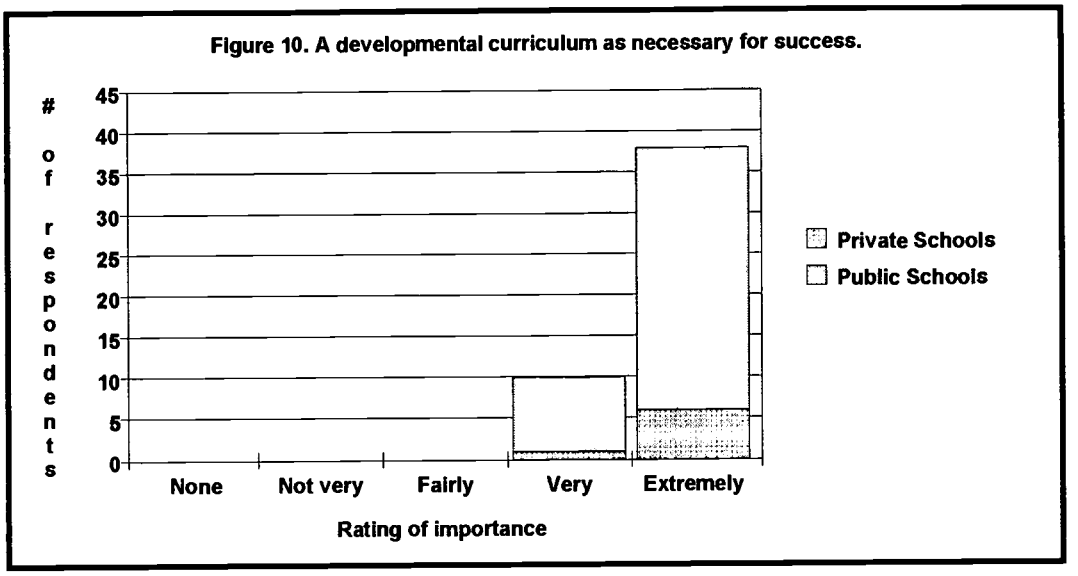
Results of the Research Questions Pertaining to the Ingredients Necessary for Successful Implementation of Mixed-Age Grouping

General Research Question 2: What ingredients are necessary for successful implementation of mixed-age grouping?

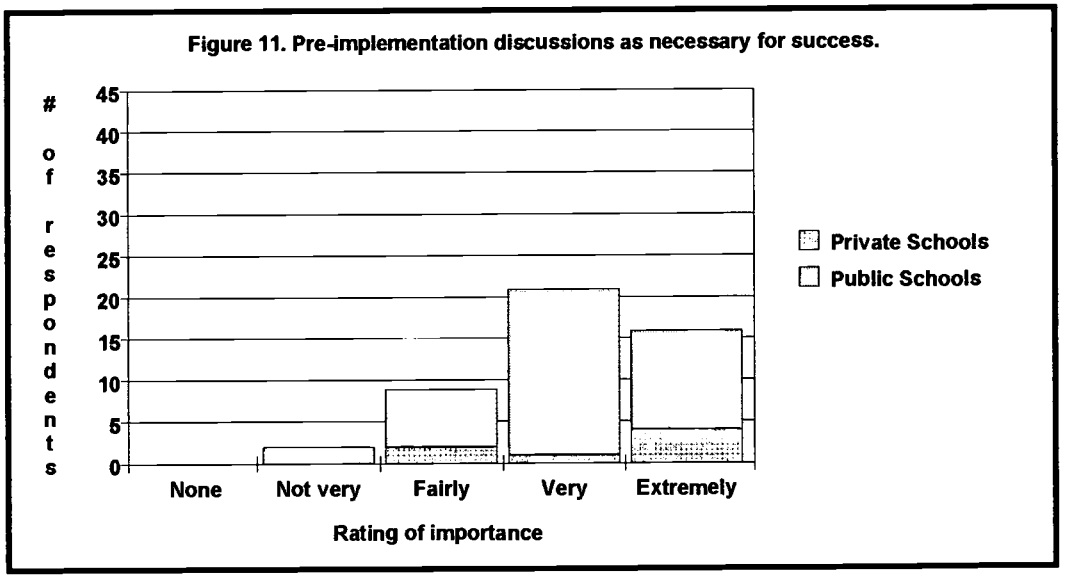
The teachers surveyed rated the ingredients necessary for successful implementation of a multiage program that includes kindergarten students. Figures 10-18 show the responses to Specific Research Questions 2A-2I.

Specific Research Question 2A: How important is a developmental curriculum designed around the needs of specific children?

Figure 10 reveals that all 48 respondents believed a developmental curriculum designed around the needs of children was a very or extremely important element in order for mixed-age grouping to be successful. Thirty-eight (79%) respondents, including six of the seven private school teachers, rated this point as extremely important.



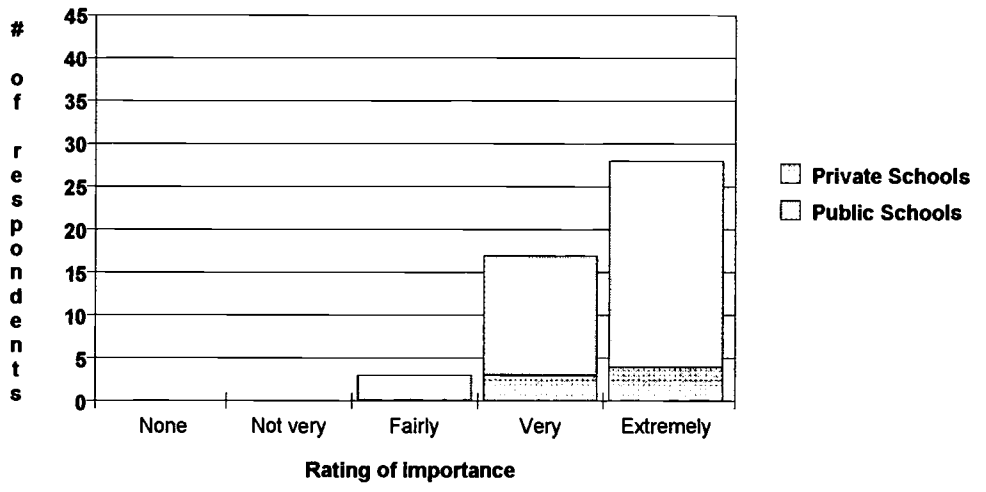
Specific Research Question 2B: How important are pre-implementation discussions?



The respondents' rating of the importance of pre-implementation discussions as an ingredient necessary for a successful multiage program is revealed in Figure 11. Sixteen respondents (33%) felt such discussions to be extremely important, 21 respondents (44%) rated this point as very important, and nine teachers (19%) saw this as fairly important. Only two teachers (4%) rated these discussions as not very important.

Specific Research Question 2C: How important is parent knowledge and support?

Figure 12. Parent knowledge and support as an ingredient for success.

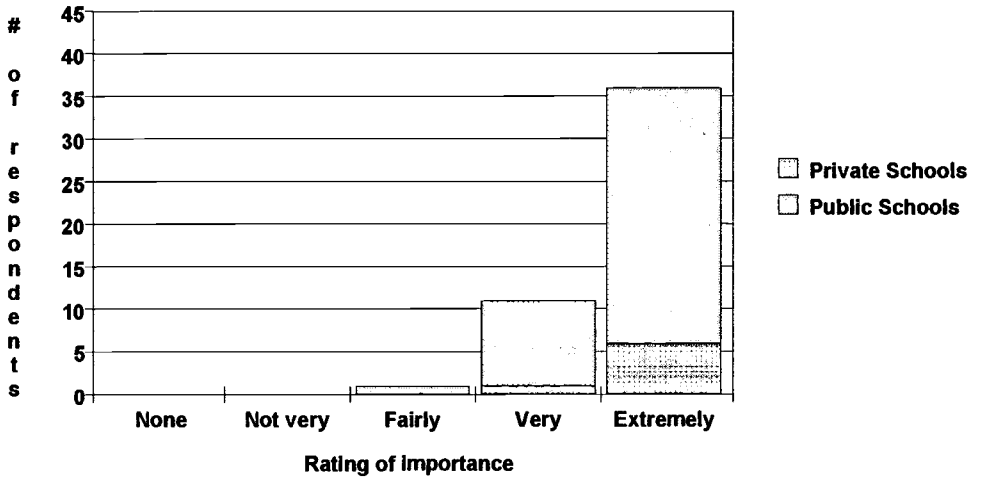


As illustrated in Figure 12, all 48 respondents rated parent knowledge and support as important to some degree if a mixed-age program is to be successful.

Twenty-eight (58%) educators believed this ingredient to be extremely important to a program's success.

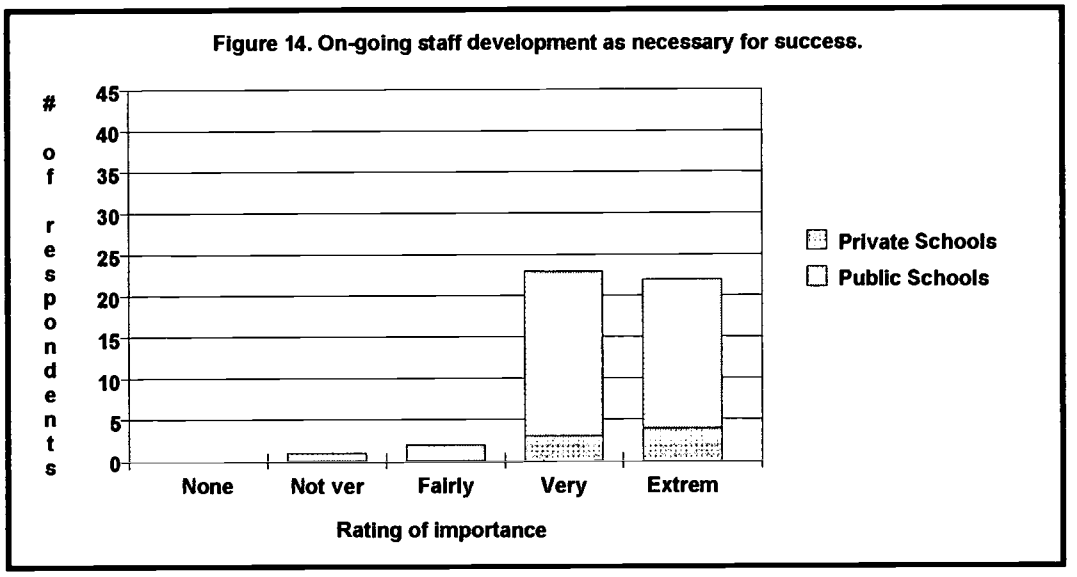
Specific Research Question 2D: How important is training for teachers in multiage philosophy?

Figure 13. Teacher training in multiage philosophy as necessary for success.



One hundred percent of the respondents saw teacher training in multiage philosophy as important if a multiage program is to be successful (Figure 13). One Montessori educator rated this ingredient as extremely important, but crossed out the word "multiage" and wrote in "Montessori."

Specific Research Question 2E: How important is on-going staff development?

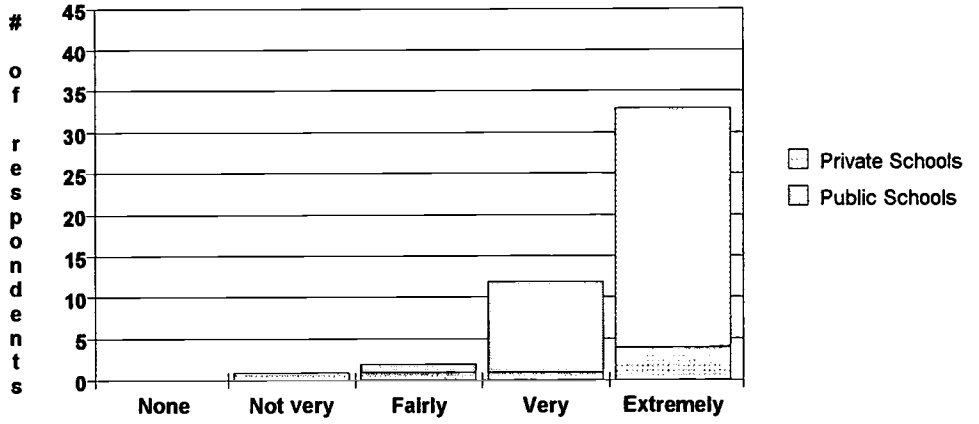


When asked to rate the importance of on-going staff development as a necessary ingredient to the successful implementation of a multiage program with kindergarteners, 47 of the 48 respondents (98%) rated this as important to some degree with 45 (94%) marking the statement as very or extremely important. One teacher rated this item as not very important (Figure 14).

Specific Research Question 2F: How important is time allotted to teachers to collaborate, plan, and share ideas?

Figure 15 depicts the results of the respondents' rating of this question. All

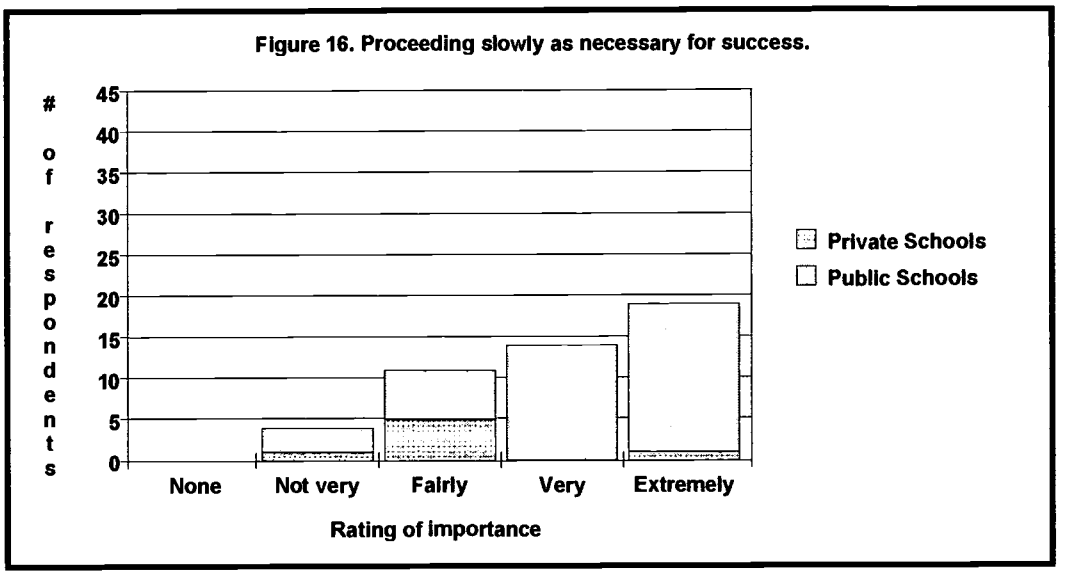
Figure 15. Teacher planning time as necessary for success.



41 public school respondents felt it was important to some degree to allot time for teachers to collaborate, plan, and share ideas with 29 (71%) public school teachers rating this as extremely important. The private school teachers were more diverse in their rating of this question's importance. Four (57%) private school teachers saw planning time as extremely important. Of the other three private school teachers, one rated such time as very important, one as fairly important, and one as not very important.

Specific Research Question 2G: How important is the pace of implementation?

As indicated in Figure 16, 44 teachers (92%) felt it was important to some

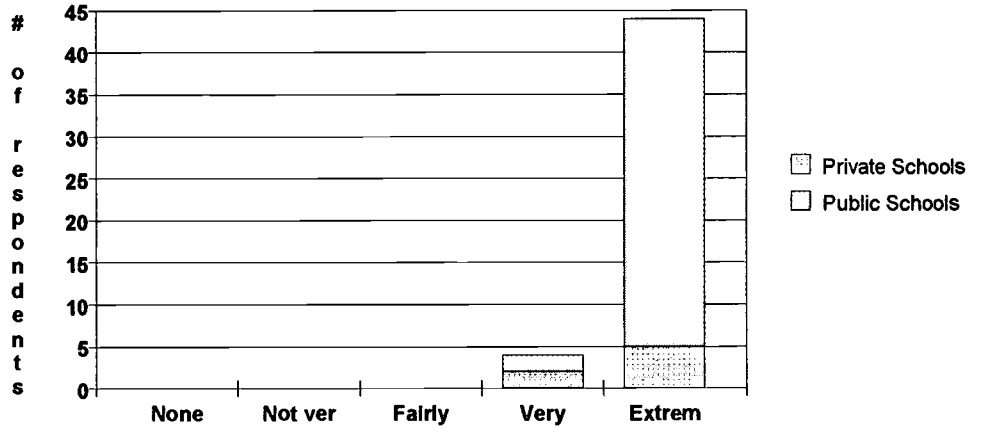


degree (40% extremely important, 29% very important, and 23% fairly important) to proceed slowly when implementing a nongraded program. Four teachers (8%) rated pace of implementation as not very important when working toward achieving a successful program.

Specific Research Question 2H: How important is a supportive administration?

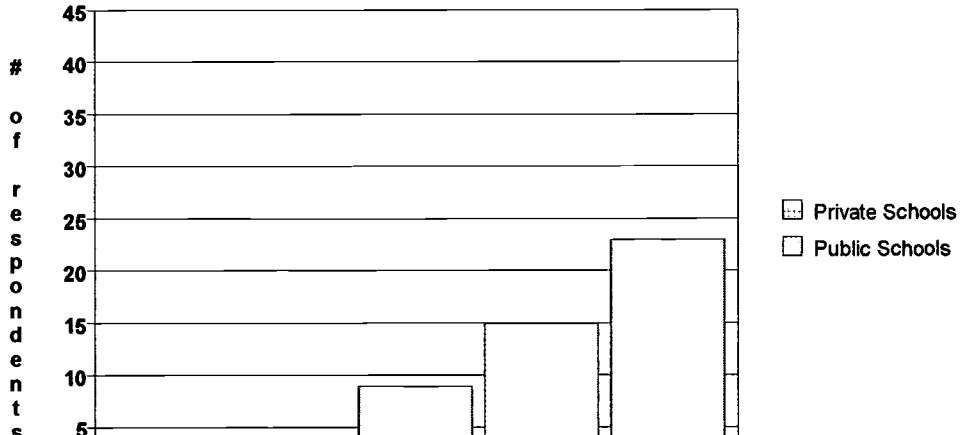
Figure 17 shows the results of this question. All 48 respondents believed it very important (8%) or extremely important (92%) to have a supportive administration in order for a multiage program to be successfully started.

Figure 17. A supportive administration as necessary for success.



Specific Research Question 2I: How important are teachers' visits to existing multiage programs/sites?

Figure 18. Visiting existing multiage programs as necessary for success.



The results of this question were rated more important than less important with public and private school responses fairly equally distributed at the important end of the rating scale. As shown in Figure 18, 98% of the teachers rated this question as important. Only one teacher felt visiting existing multiage programs was not very important for successful implementation of a multiage program.

Teachers were given the opportunity at the end of this portion of the questionnaire to list other ingredients they believed to be important to the successful implementation of a mixed-age program with kindergarteners. Some other essential ingredients for success included:

1. Small class size is important.

2. It is important to teach children, not the curriculum. An appropriate mix of kids should be selected for the program. Teachers should choose to do multiage groupings for philosophical reasons - not monetary or numerical reasons.

3. The pairing of teams and teachers who can work together is important.

4. It is vital to have lots of discussions, in service, and trial-and-error.

5. Self confidence is crucial to success!

6. Good planning is required so that each child can move to the next level.

7. Teachers should not be forced to teach it. The program is only extremely beneficial if the teacher teaching it is a supporter of multiage.

8. Parents should be given a choice whether or not they want multiage for their child; for very slow, weak kindergarteners, multiage can be stressful.

9. The key word is flexibility and it is important to note that mixed-age grouping is not developmentally appropriate for all children.

10. Teaching assistants are crucial for successful implementation.

11. A carefully planned and monitored system of tracking individual progress is essential.

Results of the Research Questions Pertaining to the Benefits of Mixed-Age Grouping for Kindergarten Students

General Research Question 3: What benefits are there for kindergarten students in a mixed-age classroom?

The teachers surveyed next responded to a series of questions relating to the benefits a multiage program offers kindergarten students. Figures 19-28 show the responses to Specific Research Questions 3A-3J.

Specific Research Question 3A: How does focus on the child and child-centered learning rate in importance as a kindergarten student benefit?

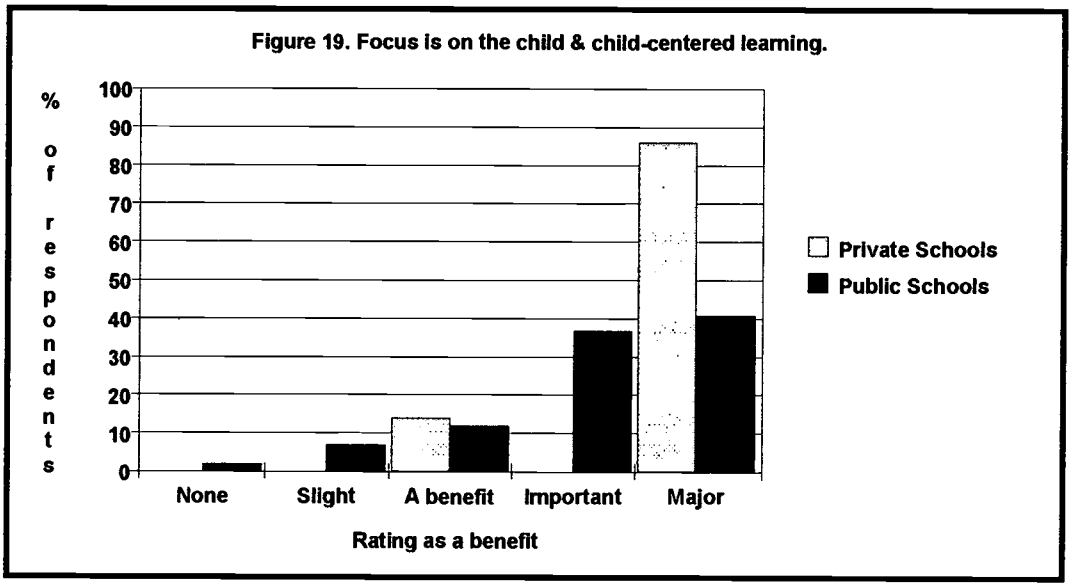
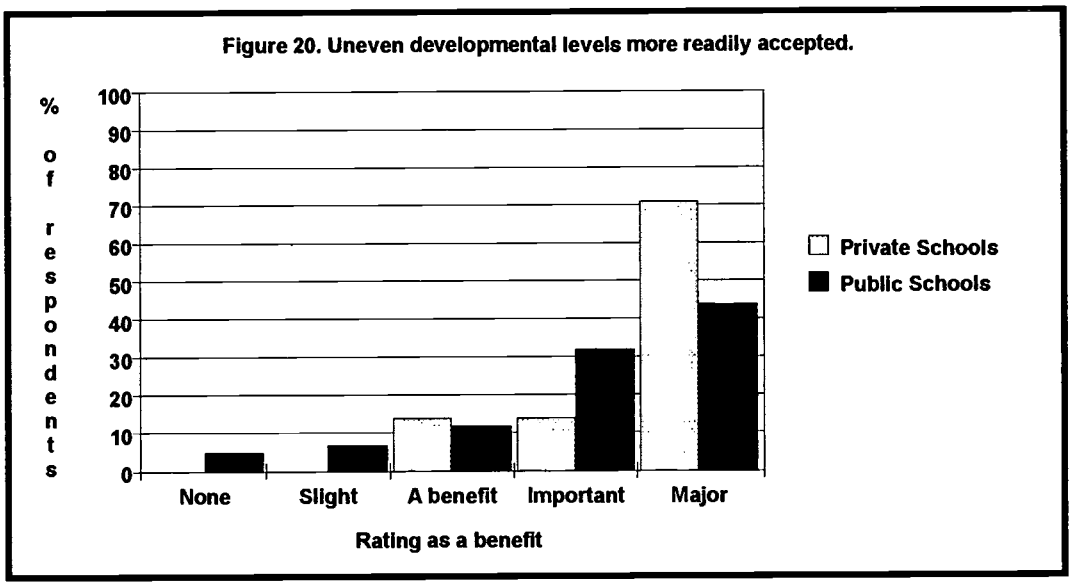


Figure 19 portrays the respondents' rating of this question. Forty-four respondents rated the focus on the child and child-centered learning in multiage groupings as a benefit to some degree. Eighty-six per cent of the private school teachers and 41% of the public school teachers saw this focus as an extremely important benefit. Only one respondent felt this was not a benefit.

Specific Research Question 3B: How does acceptance of children's uneven developmental levels rate in importance as a kindergarten student benefit?

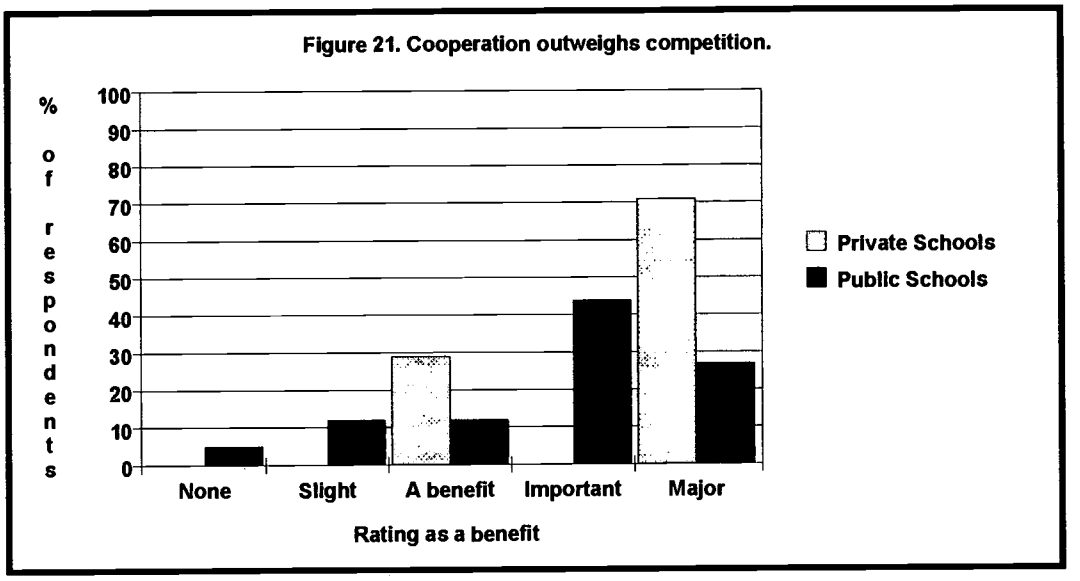
For the majority of respondents (90%), the possibility that uneven

developmental levels are more readily accepted in multiage classrooms was seen as some type of benefit. Five public school teachers considered the acceptance of children's uneven developmental level in multiage settings as only a slight benefit or not a benefit at all (Figure 20).

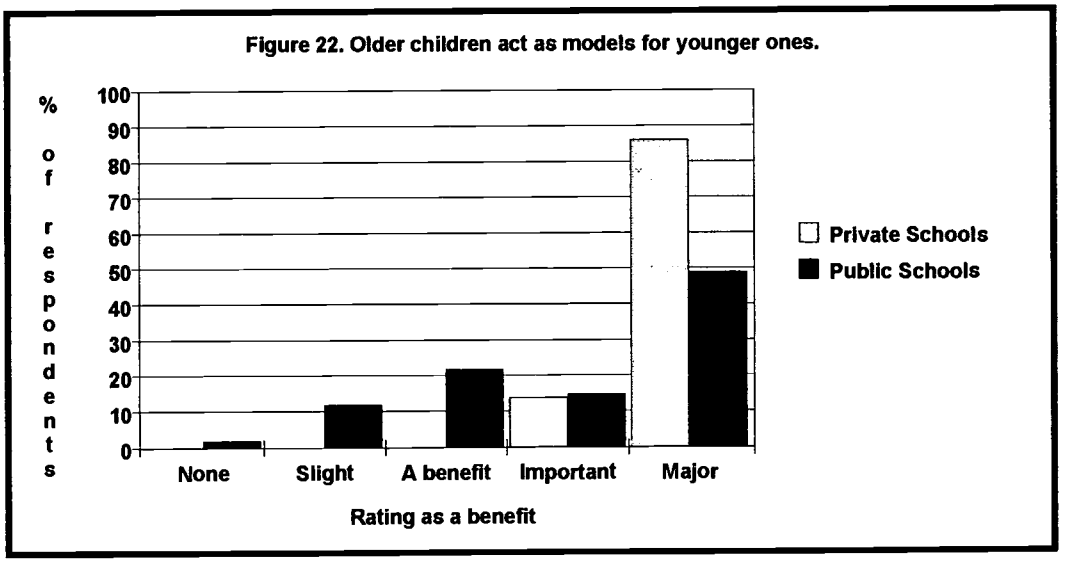


Specific Research Question 3C: How does cooperation outweighing competition rate in importance as a kindergarten student benefit?

Figure 21 illustrates that all the private school teachers rated this question as a benefit. The ratings of the public school educators were much more varied, ranging from not being a benefit at all to being a major benefit.



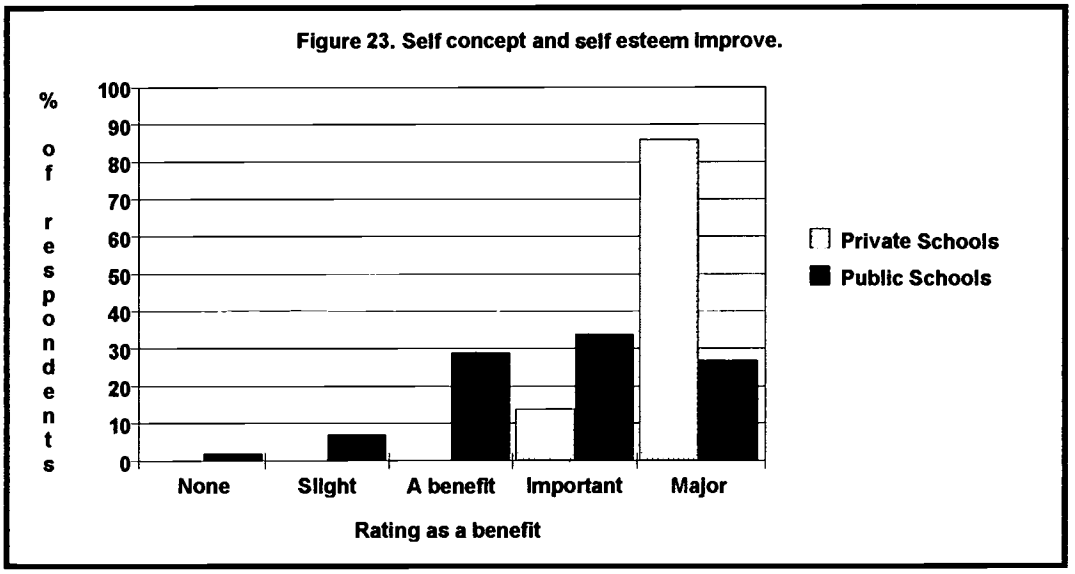
Specific Research Question 3D: How does the modeling of older children for younger ones rate in importance as a kindergarten student benefit?



One hundred per cent of the private school teachers marked this question

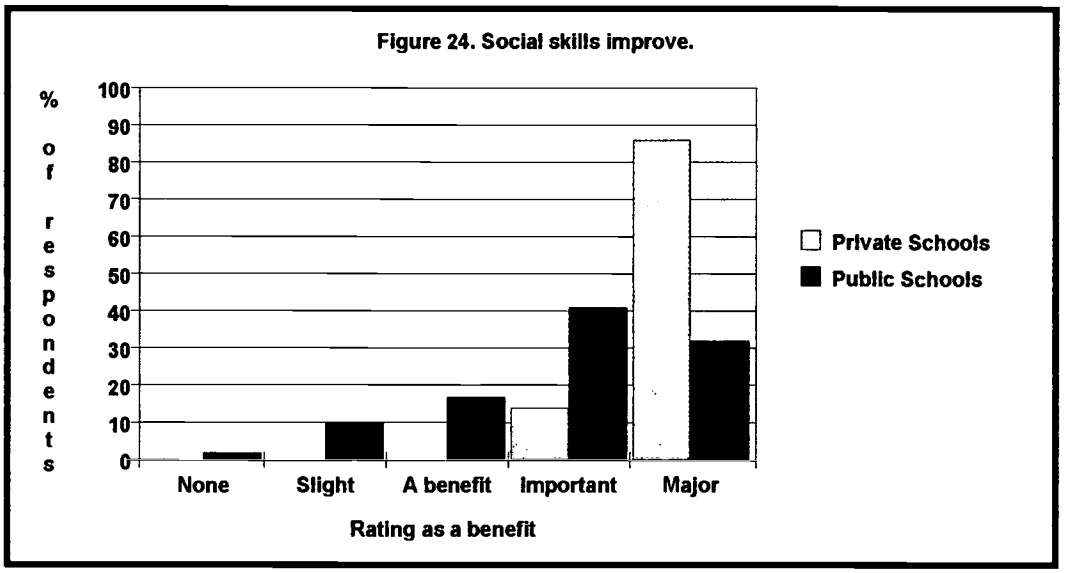
as an important or major benefit for their students. The public school teachers were more diverse in their ratings of this question, but 86% did see older children acting as models for younger children as some type of benefit (Figure 22).

Specific Research Question 3E: How does the improvement of self concept and self esteem rate in importance as a kindergarten student benefit?



When asked to rate the improvement of children's self concept and self esteem, most respondents (44) saw this as a benefit. All the private school teachers rated this as an important or major benefit (Figure 23).

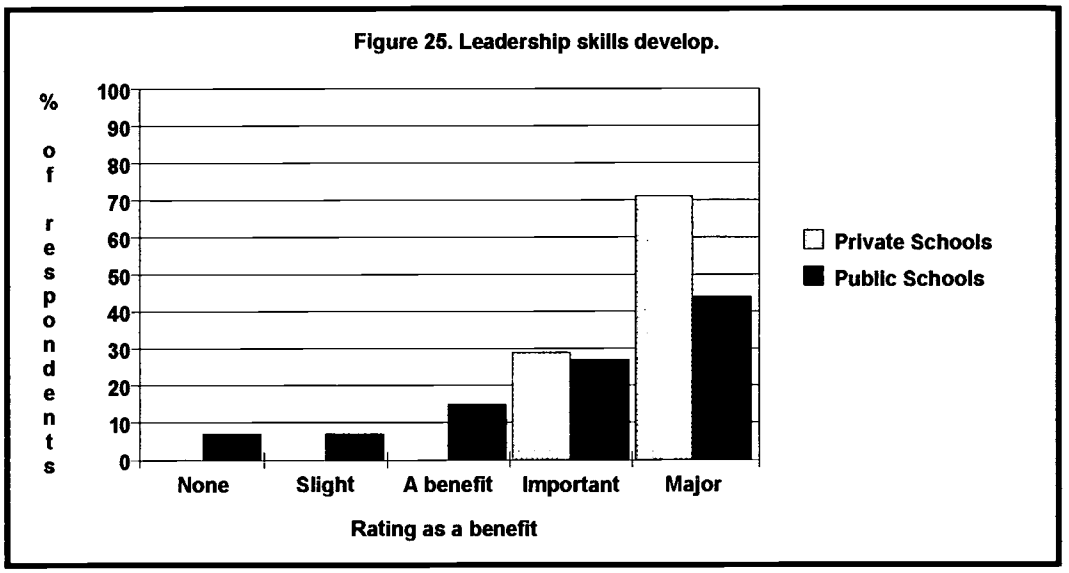
Specific Research Question 3F: How does the improvement of social skills rate in importance as a kindergarten student benefit?



As Figure 24 illustrates, the improvement of social skills was seen as an important or major benefit by all of the private school teachers and as a benefit to some degree by 90% of the public school educators. Ten per cent of the public school teachers saw this as only a slight benefit and 2% felt it was not a benefit.

Specific Research Question 3G: How does the development of leadership skills rate in importance as a kindergarten student benefit?

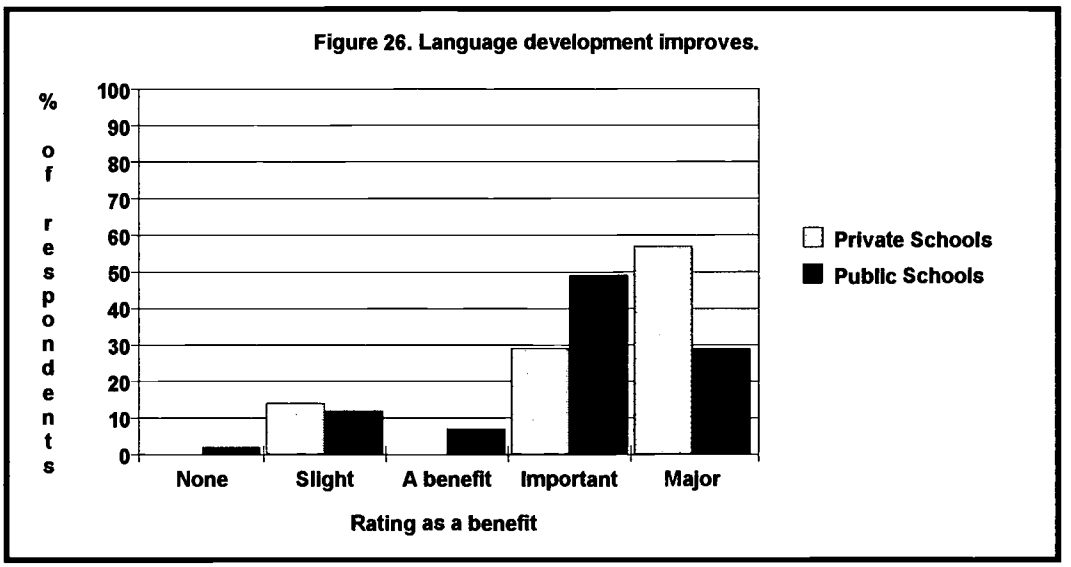
The results of this question, shown in Figure 25, point out that while all seven private school teachers saw the development of leadership skills as an



important or major benefit, only 71% of the public school teachers felt the same way. Seven percent of the public school teachers did not see this as a benefit at all.

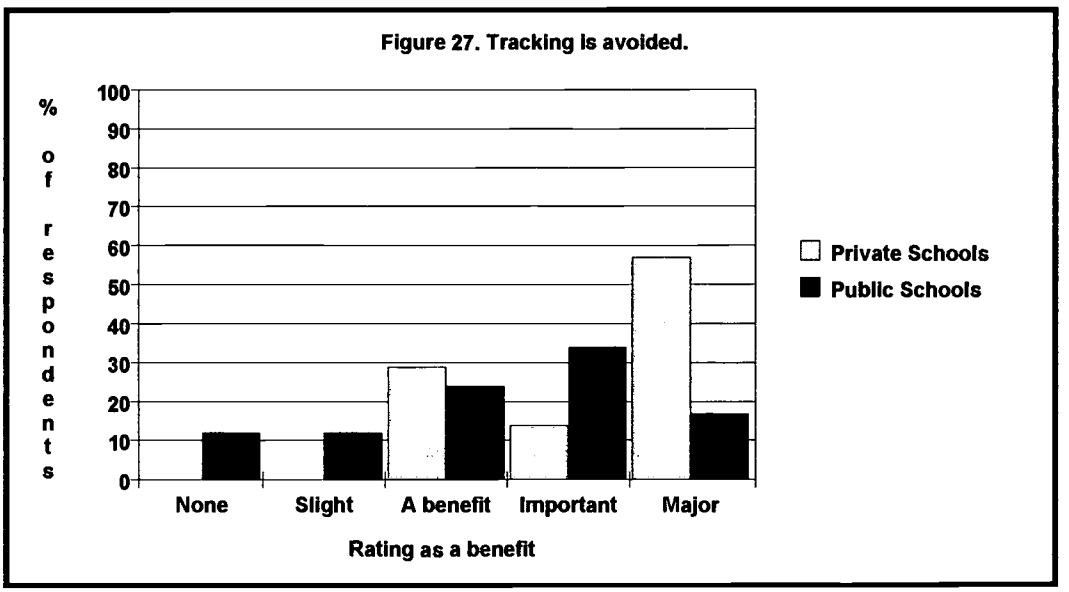
Specific Research Question 3H: How does the improvement of language development rate in importance as a kindergarten student benefit?

The public and private school educators' rating of this question were more closely aligned than in some of the previous questions (Figure 26). Eighty-six percent of private school teachers and 78% of public school teachers believed the improvement of a child's language development to be a major or important benefit. Twelve per cent of the public school respondents saw this as a slight benefit compared with 14% of the private schools.



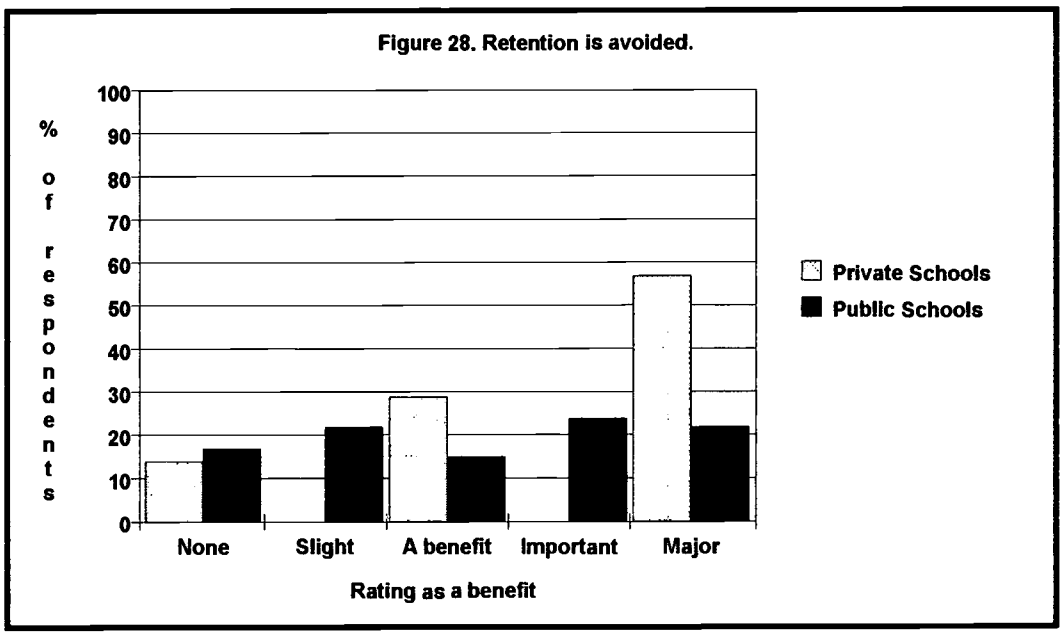
Specific Research Question 3I: How does the avoidance of tracking rate in importance as a kindergarten student benefit?

The responses to this question, as shown in Figure 27, were diverse. A



fairly equal number of public school teachers saw the avoidance of tracking as no benefit (12%) as well as a major benefit (17%). Thirty-four per cent of public school respondents did rate this as an important benefit of a mixed-age program. The private school teachers all rated this point as a benefit, but with varying degrees of importance. Fifty-seven per cent viewed it as a major benefit, 14% felt it was an important benefit, and 29% rated it simply as a benefit.

Specific Research Question 3J: How does the avoidance of retention rate in importance as a kindergarten student benefit?



The responses to this question were spread across the rating scale for both

public and private school teachers. As shown in Figure 28, a fairly equal portion of public (17%) and private (14%) school teachers rated the avoidance of retention as not being a benefit. However, 57% of the private school teachers rated it a major benefit compared to only 22% of the public school teachers.

At the end of this part of the survey dealing with respondents' rating of the benefits a multiage program offers kindergarteners, respondents were invited to list other benefits that had occurred in their classroom because of the mixed-age grouping. Some of the other benefits cited were:

1. Having children for two years was a huge benefit (academically and socially)!

2. The 'spirit' of the interaction was enjoyed.

3. Advanced students were able to work with students on their intellectual level while remaining with students on their social level.

4. The knowledge of 'older students' was reinforced when they explained things to 'kinder.'

5. Kindergarten children were able to adapt more easily to school.

6. Classroom management was much easier because younger students

modeled the behavior of older ones.

7. Teachers got to know their children and their families better because children were with the same teachers for two years.

8. If children begin early enough in a carefully designed program which takes them from preschool through kindergarten, all students will have attained the necessary reading and fair math skills by the end of their kindergarten year.

9. In the multiage classroom, a caring community was created where each child was valued, no matter what his/her abilities.

In citing other benefits that have occurred in the classroom because of the mixed-age grouping, not all of the responses were positive. One teacher wrote "we were K-1 for 3 years. We did not see the expected results take place." Two other teachers made similar notes on this portion of the survey.

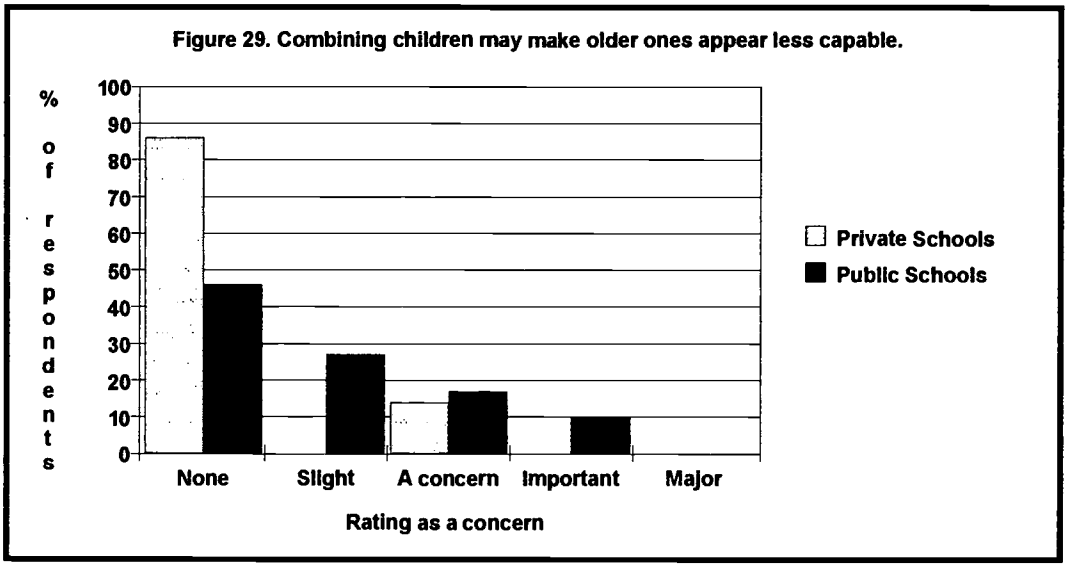
Results of the Research Questions Pertaining to the Concerns for Kindergarten Students in a Mixed-Age Classroom

General Research Question 4: What concerns arise for kindergarten students in a mixed-age classroom?

The teachers who participated in the survey were asked to rate the concerns they had pertaining to kindergarteners in a multiage setting. Figures 29-33 show the responses to Specific Research Questions 4A-4E.

Specific Research Question 4A: How does the combination of older and younger children, which may make older children appear less capable, rate in importance as a concern teachers have for kindergarten students?

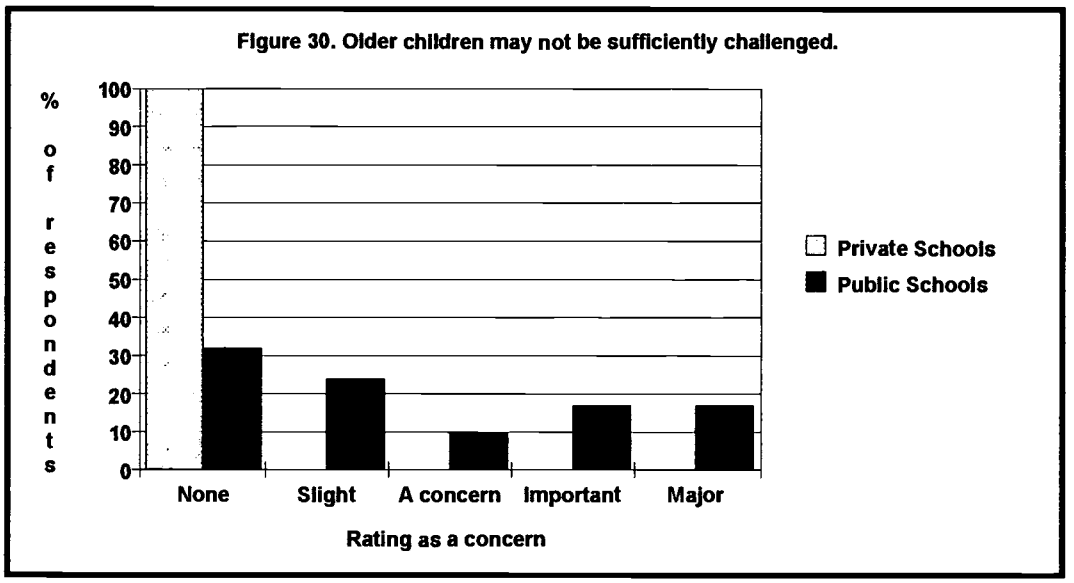
As seen in Figure 29, 86% of the private school teachers felt it was not a



concern that combining children makes older ones appear less capable. The public school teachers were fairly evenly divided in their rating of this question, rating it from not a concern to being an important concern.

Specific Research Question 4B: How does the insufficient challenge older children may feel rate in importance as a concern teachers have for kindergarten students?

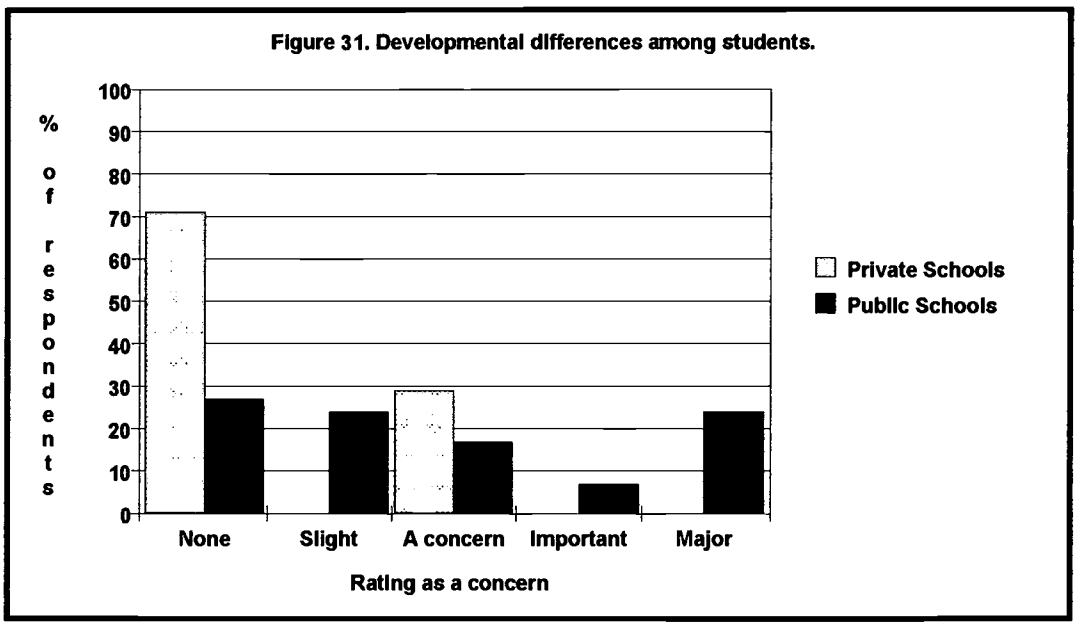
Figure 30 illustrates that the consensus of the private school teachers was



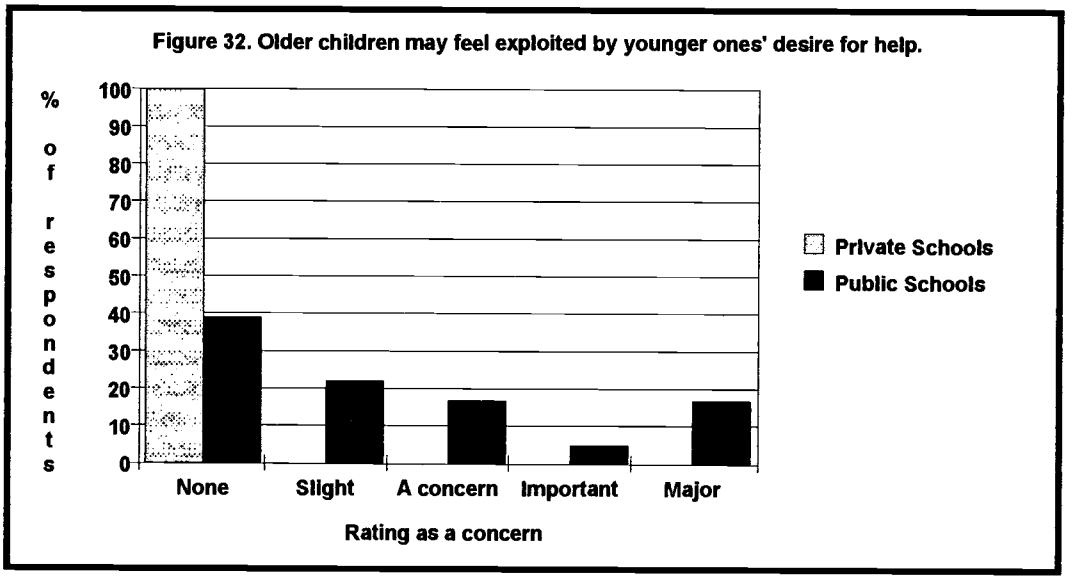
that older children not being sufficiently challenged was not a concern at all in their mixed-age setting. Responses from the public school teachers were relatively evenly dispersed across the rating scale with ratings ranging from this being a major concern to not a concern at all.

Specific Research Question 4C: How do developmental differences among students rate in importance as a concern teachers have for kindergarten students?

The developmental differences among students was not a concern for 71% of the private school educators and 27% of the public school professionals. Yet a similar number of public school teachers (24%) also saw this as a major concern and 7% of the same group felt it was an important concern (Figure 31).

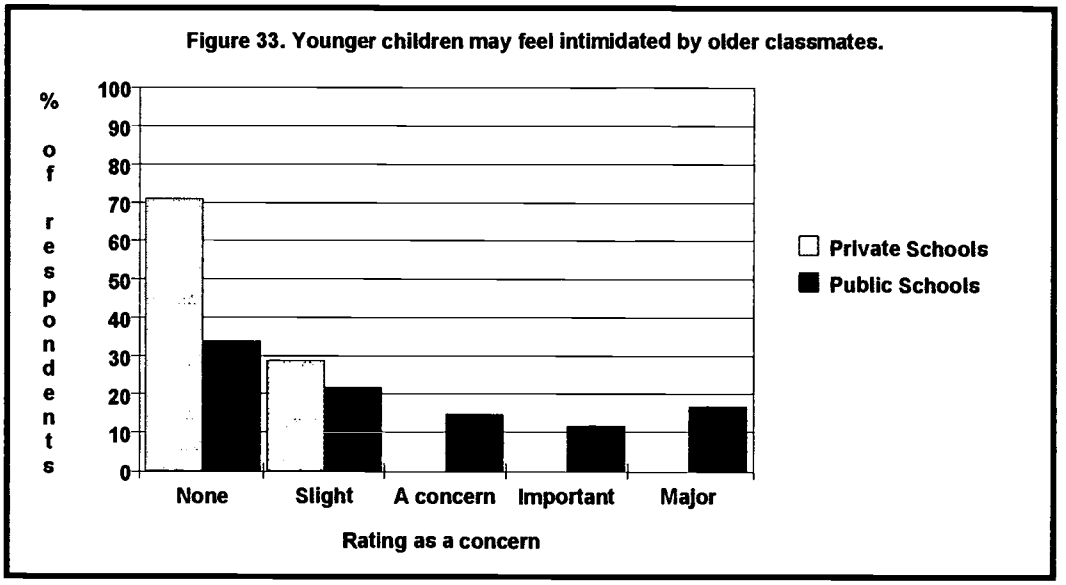


Specific Research Question 4D: How does the exploitation older children may feel by younger ones' persistent desire for help rate in importance as a concern teachers have for kindergarten students?



Regarding the exploitation older children may feel by younger ones' persistent desire for help, the public school respondents were spread across the rating scale in their rating of this item as a concern (Figure 32). Thirty-nine per cent of the public school teachers saw this as not a concern at all, 22% felt it was a slight concern, 17% rated it as a concern, 5% saw it as an important concern, and 17% believed it to be a major concern. The private school teachers were in 100% agreement that this possible exploitation was not a concern in their settings.

Specific Research Question 4E: How does the intimidation younger children may feel from older classmates rate in importance as a concern teachers have for kindergarten students?



Again, the public school teachers were not in agreement on this question. Their ratings were spread across the scale from not a concern at all to this being a major concern. The majority of private school educators (71%) did not see possible intimidation as a concern while 29% of the same group believed it to be a slight concern.

When given the opportunity to share other concerns they might have about the mixed-age grouping of kindergarten students, 35 respondents (73%) related

their concerns. The most noted concerns were:

1. Ideologically, there is no better system. Implementing the practical aspects of the program though, takes an incredible amount of time, energy, and expertise. Ages of children can be forgotten and small older children or big younger children may not receive appropriate expectations.

2. Full-time multiage grouping with kindergarten allows some children to fall through the cracks and miss much needed basic readiness skills. Many parents express concerns that their older children are being 'teachers' rather than 'models.'

3. Kindergarteners are too 'special' coming into public school. They have too many developmental needs that cannot be addressed in a multiage group.

4. Multiage should not be a top-down decision; the teachers must be interested and believe in the philosophy.

5. Teachers are concerned about how to get parent involvement.

6. There is too wide a skill level range.

7. Kindergarten students are not nurtured in a multiage program. Teachers are not as concerned with younger kindergarteners not progressing as quickly, as they will be in the group again next year.

8. It takes a good team of people (principal, parents, teachers, and students) to make successful multiage grouping happen!

9. Mixed-age grouping involves separate lesson plans or individual lesson plans to meet each child's needs.

10. The kindergarten curriculum is so different from first grade, it is really a stretch to provide appropriate instruction for everyone. Kindergarten should not be included with other age groups.

At the very end of the questionnaire, the teachers were asked to write anything else they wanted to share about their multiage setting. The responses were positive and negative:

1. "It's an exciting way to watch students develop. Even if you have a 'graded' situation, you have children who are on different developmental levels."

2. "We are forced by Kentucky law to use multiage/multi-ability. I do not think it is the best for our children."

3. "I am also the parent of a second grader in a multiage (1 to 3) class and feel it has grown even stronger in the last three years as teachers better understand and implement multiage grouping."

4. "In a 'regular' classroom there are sufficient multi-ages and multi-abilities; why add more."

5. "I have had long experience in a multiage setting. Any other arrangement seems strange to me and much less desirable."

6. "In our school we prefer two ages together instead of three. Both are being tried."

7. "We work as a team of four teachers. We are departmentalized. We change classes. It works wonderfully!"

8. "I would love to see Montessori as an option in more public schools. It is such a natural way of learning."

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Introduction

The final chapter of this research is divided into three major sections. A summary of the study is presented by reviewing the problem, procedures, and research questions. The conclusions section is organized into four areas: (a) discussion of the research findings related to the pedagogical reasons for implementation of mixed-age grouping of kindergarten students, (b) discussion of the research findings pertaining to the ingredients necessary for successful implementation of mixed-age grouping, (c) discussion of the research findings pertaining to the benefits of mixed-age grouping for kindergarten students, and (d) discussion of the research findings pertaining to the concerns for kindergarten students in a mixed-age classroom. The final section includes the implications of the study for kindergarten students in a multiage grouping and implications for further research. A concluding statement provides the reader with some "food for thought."

Summary of the Study

Statement of the Problem

The study focused on the effects of a multiage grouping on kindergarten students. Another aspect of the study was to look at the reasons a school may choose to implement a mixed-age grouping which includes kindergarteners. Also, the ingredients deemed necessary for successful implementation of mixed-age grouping with kindergarten students were analyzed.

Research Questions

The study was comprised of four general research questions:

General Research Question 1: Why do elementary schools implement mixed-age grouping for kindergarten students?

From this general research question, nine specific questions were developed to determine the reasons which impact a school's decision to implement a mixed-age program.

General Research Question 2: What ingredients are necessary for successful implementation of mixed-age grouping?

From this general research question, 11 specific questions were developed

to determine the importance of various ingredients in the successful implementation of a multiage program that includes kindergarteners.

General Research Question 3: What benefits are there for kindergarten students in a mixed-age classroom?

From this general question, 10 specific questions were developed to determine the extent teachers felt specific items benefited young children.

General Research Question 4: What concerns arise for kindergarten students in a mixed-age classroom?

From this general question, five specific questions were developed to determine the extent teachers felt specific items were a concern to the children they were teaching.

Statement of Procedures

Quantitative nonexperimental research was used in this study. The research design chosen was survey research used for a descriptive purpose and in an explanatory way. Since few surveys have been developed which address this study's focus on multiage classrooms at the kindergarten level, a Likert scale questionnaire was developed by the researcher. The items for the questionnaire

were developed from a thorough review of the literature on the subject.

The subjects involved in the study were 48 public and private school teachers from the states of Ohio and Kentucky who teach kindergarten-age students in a multiage setting. This represented 64% of the 75 teachers who received the questionnaire.

When the questionnaires were returned, the demographic information for each teacher was tallied and recorded on a master sheet. Tally marks were also used to record responses for each of the specific research questions on the questionnaire. Graphic presentation in the form of a series of histograms was compiled and analyzed to adequately explore the study's findings and assist in review of the data. A narrative highlighted significant aspects of the data.

Conclusions

The conclusions section provides discussion of the research findings based upon the responses to the questionnaire.

Discussion of the Research Findings
Related to the Pedagogical Reasons
for Implementation of Mixed-Age
Grouping of Kindergarten Students

From the nine statements on the questionnaire that were developed to determine the reasons important in a school's decision to implement a mixed-age program, seven of the statements were rated by at least 90% of the 48 respondents as either fairly, very, or extremely important. The seven favorable reasons a multiage program may be implemented by a school was because the school viewed multiage education as (a) benefiting children, (b) encouraging appropriate practices, (c) encouraging teachers to be more student-centered, (d) reducing competitive pressures on children, (e) developing peer learning, (f) facilitating flexible student pacing, and (g) promoting a family-like climate. These results support research which has concluded that mixed-age groupings benefit children (Bacharach et al., 1995; Blackmore, 1996; Connell, 1987; Feng, 1994; Katz et al., 1990; Miller, 1994). From such benefits come other positive outcomes, such as encouraging teachers to be more student-centered, facilitating flexible student pacing, developing peer learning, and reducing competition for children.

In his national research on why schools choose to implement ungraded classrooms, Miller found that "benefits children" was ranked number one. Katz et al. suggested the reason multiage groupings do benefit children is because such environments resemble and foster traditional, natural family and neighborhood groupings. Young children spend many of their waking hours in child care and/or school settings. Given these recent trends in child care, a multiage program can offer young children the family- and sibling-like relationships they might otherwise not receive.

The National Association for the Education of Young Children (NAEYC) has proposed teachers follow practices that are both developmentally and educationally appropriate for young children (Bredekamp, 1987). According to Bacharach et al. (1995), Bredekamp, Byrnes et al. (1994), Katz et al. (1990), and Miller (1994), multiage grouping reflects the NAEYC guidelines for educational practices that are developmentally and educationally appropriate. The survey's respondents supported this prior research. All 48 respondents rated the encouragement of appropriate practices as important to some degree in their school's reason for implementing a mixed-age program with kindergarten students.

Anderson and Pavan (1993) point out

> multi-age grouping is a common practice in nursery schools and preschools, and in some respects it is strange that public schools in setting up kindergartens for only five-year-olds, first grade for only six-year-olds, and so forth, have disregarded what is naturally done in prekindergarten schooling. (p. 99)

With the increasing emphasis in kindergarten classrooms on using developmentally appropriate practices, perhaps the usage of mixed-age groupings will begin to creep out of preschool classrooms and into elementary schools.

Two items in the area of the survey dealing with the reasons schools establish mixed-age programs were not rated as important as the previous seven reasons. These two statements dealt with establishing a multiage program as a result of external forces such as state legislation or grant funding, and establishing such a program as a result of enrollment figures.

Sixty-nine percent of the respondents rated the impact of state legislation or grant funding as important to some degree in their school's decision to implement mixed-age groupings. This is an interesting statistic to review when it is

realized that 41 of the 48 respondents (85%) were public school teachers and 33 of these 41 teachers (80%) taught in Kentucky where multiage education has been legislated since 1990 by the Kentucky Education Reform Act (Institute on Educational Reform, 1994). As Miller (1994) discovered, mandates can be beneficial, because some respondents from Kentucky where Miller administered his survey said they loved teaching in a multiage setting.

This researcher found similar responses from many of the Kentucky educators who shared their feelings on the open-ended portion of the survey. Those teachers who shared positive experiences saw heterogeneous grouping of children by ages "an exciting way to watch students develop" and felt "you get a better sense of where a student is when you work with them for two years. You can also make lasting relationships with the family of the child." A few Kentucky teachers wrote that multiage grouping is being used only because it is the law and they would not do so otherwise.

Byrnes et al. (1994) and Surbeck (1992) looked at parent and student attitudes toward multiage classrooms established because of uneven enrollment figures, not based on a desire to move philosophically toward the multiage model

recommended by the NAEYC. According to Byrnes et al., people involved in such classrooms were overwhelmingly unsupportive of multiage grouping.

This survey supported the findings of Byrnes et al. Although attitudes toward multiage grouping was not asked directly, two teachers who rated the establishment of a multiage program because of uneven enrollment figures as important added comments such as "in a 'regular' classroom there are sufficient multi-ages and multi-abilities; why add more" and "let's do it because it will benefit the children, not simply to fix high numbers." This second teacher's comment was addressed in Surbeck's work. Surbeck observed that when the goal of mixed-age grouping is mainly to reduce the pupil to teacher ratio problems will arise and the children in the one classroom may not be treated as their own group, but as subgroups of two grades.

The research to date (Anderson & Pavan, 1993; Bacharach et al., 1995; Blackmore, 1996; Bredekamp, 1987; Byrnes et al., 1994; Connell, 1987; Feng, 1994; Katz et al., 1990; Miller, 1994; Mounts & Roopnarine, 1987; Oregon State Department of Education, 1994) is overwhelmingly supportive of using mixed-age groupings with young children. Hopefully, this research will add to the existing

body of knowledge supporting the establishment of multiage classrooms with kindergarten-age students.

Discussion of the Research Findings Pertaining to the Ingredients Necessary for Successful Implementation of Mixed-Age Grouping

In reviewing the literature on multiage grouping, researchers cited a number of elements which should be present in a quality mixed-age program. The nine elements cited most often were added to the survey. The respondents rated the level of importance of each item based on how essential the item was for successful implementation of a quality nongraded program. The nine items the respondents rated along with their overall rating of importance by the subjects were (a) a developmental curriculum designed around the specific needs of children (100% importance rating), (b) pre-implementation discussions (98% importance rating), (c) parent knowledge and support (100% importance rating), (d) training for teachers in multiage philosophy (100% importance rating), (e) on-going staff development (98% importance rating), (f) time for teachers to collaborate, plan, and share ideas (98% importance rating), (g) proceeding slowly

(92% importance rating), (h) a supportive administration (100% importance rating), and (i) visiting existing multiage programs/sites (98% importance rating). It is clearly evident that each of the nine items was important to the respondents if their multiage program was to be successfully implemented.

Although no set plan exists for establishing a multiage program, Bacharach et al. (1995) outlined essential steps to take in the process of changing from a traditional to a multiage classroom. First, a climate for conversation must be created within the school where teachers are given time to determine and develop the principles that will guide the new program. Principals must be willing partners in the change process to help promote the program's intentions. Team building needs to occur within the school where a variety of viewpoints and ideas are accepted. Next, visiting other multiage classrooms will enable teachers to learn from what others have done. The program must then be designed with deliberation and time must be given to plan, process, rework, and inform. Parents must be informed, educated, and invited to participate at whatever level they are able. Finally, teachers who desire to establish a multiage program must be willing to let go of the need to control and envision themselves as coaches or facilitators, rather

than direct instructors.

This researcher found it interesting that a supportive administration was the item which respondents rated the highest and were in the greatest agreement about regarding level of importance for ingredients necessary for successful implementation of a multiage program. Miller found the same results in his 1994 survey with his respondents rating "having support" as the most commonly noted factor contributing to successful mixed-age implementation. According to Miller however, the form of the support matters with the best support coming "from a 'flexible principal who understands the change effort' and from an 'active school board and superintendent.' " (p. 9). Surbeck (1992) depicted the problems that can arise when administrators and teachers do not understand the rationale and theory that provide the scaffold for multiage programs. "In short, a solid commitment (and ability) to articulate the philosophy behind mixed-age grouping is the cornerstone upon which appropriate multi-age programs are created. If that belief infrastructure does not exist, the program is likely to be inappropriate and, ultimately, to fail" (Surbeck, pp. 3-4).

A multitude of components essential for establishing a successful multiage

program have been given by a number of researchers. Most notable for this study were the prerequisites for success cited by Anderson and Pavan (1993), Bacharach et al. (1995), Gutloff (1995), Katz et al. (1990), Miller (1994), and Oregon State Department of Education (1994). Space prohibits a delineation of the factors of successful multiage implementation offered by these authors, yet interested readers are encouraged to go to these sources for invaluable advice and suggestions.

Discussion of the Research Findings Pertaining to the Benefits of Mixed-Age Grouping for Kindergarten Students

On this next portion of the survey, respondents were asked to rate the benefits a multiage program offers kindergarten students. Ten benefits were listed for rating, yet as was the case with the first two parts of the survey dealing with reasons for implementation and ingredients necessary for successful implementation, a much higher number of items could have been presented for rating. The benefits chosen for inclusion on the survey were those gleaned as most important through repeated citation by various authors. The ten benefits presented to the study's subjects for rating were (a) focus is on the child and child-centered

learning, (b) children's uneven developmental levels are more readily accepted, (c) cooperation outweighs competition, (d) older children act as models for younger ones, (e) self concept and self esteem improve, (f) social skills improve, (g) leadership skills develop, (h) language development improves, (i) tracking is avoided, and (j) retention is avoided.

Eight of the ten items on the survey were rated by the respondents as a benefit, an important benefit, or a major benefit. The eight items the respondents rated highly along with their overall rating of importance as a benefit were (a) focus is on the child and child-centered learning (92% importance rating), (b) uneven developmental levels more readily accepted (90% importance rating), (c) cooperation outweighs competition (85% importance rating), (d) older children act as models for younger ones (88% importance rating), (e) self concept and self esteem improve (92% importance rating), (f) social skills improve (90% importance rating), (g) leadership skills develop (88% importance rating), and (h) language development improves (85% importance rating). These results have been supported by other researchers (Anderson & Pavan, 1993; Bacharach et al., 1995; Blackmore, 1996; Katz et al., 1990; McClellan & Kinsey, 1996; McLain et

al., 1995; Miller, 1994; Roopnarine & Johnson, 1983).

Anderson and Pavan discussed how multiage grouping is accruing advocates and emerging as a powerful strategy for promoting learning based in large part on many of the benefits listed in the survey which such a grouping offers to children. Multiage education supports the premise that schools exist to educate youth and prepare them to one day take their place as positive contributing members of society. Anderson and Pavan describe how people work in groups within education and in the outside world. In order to succeed in life, graduates of American schools will need to possess the attitudes and skills associated with effective group participation. By its very nature, multiage grouping supports group work, as well as fostering cooperation and one's self concept, developing leadership skills, and greatly improving social skills.

The respondents' rating of avoidance of tracking as a benefit in multiage education was mixed. Overall, 79% believed this to be a benefit; however, both the public and private school teachers were fairly evenly distributed in their ratings of this point ranging from not a benefit to a major benefit. Prior research (Bacharach et al, 1995; Feng, 1994; McLain et al., 1995) had pointed to examples

where tracking is avoided in multiage settings because children should be compared with their own progress in a multiage class and not with age mates. Yet, the fact that the survey results did not overwhelmingly view the avoidance of tracking as a benefit can perhaps be explained by some of the respondent's comments. A majority of the respondents were from Kentucky where multiage grouping is state mandated and not overwhelmingly accepted in all schools. Some teachers commented that although they teach in a multiage classroom, they still group students by ability to teach the curriculum. Many respondents stated that the kindergarten and first-grade curriculum are too different, so their students have to be grouped by ages in order to teach the curriculum.

This researcher was surprised by these responses, especially in light of the fact that one of the underlying principles of multiage education is that the teacher accepts each child at the level he is at without regard to traditional age expectations. It appears that perhaps some educators need continued education in multiage education so they are best meeting the children's individual needs. Katz et al. (1990) stated "the curriculum for all young children should include opportunities for children to work on extended group projects in which individuals

contribute differentially to the effort at many levels of competence" (p. 47).

The other item which appeared controversial was the avoidance of retention as a benefit in mixed-age groupings. Again, respondents' rating of this item ranged from it not being a benefit to it being an important benefit with ratings evenly distributed among all rating levels. Retention of children is a hotly debated topic and a definitive solution will not appear here. Is mixed-age grouping a solution to the retention question? Perhaps it offers insight more into individual teacher's belief systems than to the characteristics and needs of the child. If a child is readily accepted into a classroom and the teacher fits instruction to the child's needs, whether this instruction occurs in a traditional graded classroom or a multiage one, the child stands a greater chance of achieving some degree of success.

Anderson and Pavan (1993) offer an interesting idea regarding retention in multiage groupings. Despite the fact that research evidence against retaining children is overwhelming, Anderson and Pavan state that

> worth noting is that when the environment is nongraded and multi-aged, remaining in the three-year unit for a forth year might actually go relatively

unnoticed by either the 'retained' child or his/her classmates, since everyone's focus will be on continuous progress and academic success, rather than upon who passed, and who failed. (p. 101)

Discussion of the Research Findings Pertaining to the Concerns for Kindergarten Students in a Mixed-Age Classroom

From among the five questionnaire statements that were developed to ascertain the concerns educators have for kindergarten students, the results were split between the public and private school teachers. The private school educators were in close agreement, between 71% and 100%, that each item was not a concern at all in their settings. The private school teachers, six who teach in a Montessori setting, seemed to be more accepting of children's unique developmental levels.

The public school educators were again spread out in their ratings of the items as concerns, with the items each rated between being a major concern to not being a concern at all. This researcher questioned whether personal bias against multiage education was a factor in the respondent's ratings.

As stated in Chapter II of this study, the concerns listed in the survey could occur in a traditional graded classroom. There is much material available on multiage education and interested readers would be encouraged to research possible solutions to concerns they may have before proceeding with implementation or helping solve an already existing problem.

Bacharach et al. (1995) offers advice from teachers to those venturing into multiage grouping. Much of this advice addresses the concerns outlined in this study's questionnaire. This advice states that teachers must be open-minded and flexible; teachers must believe in the concept of child-centered education, and the room must be child-centered; teachers in multiage education must have a support network; and the entire school must understand what is being done (Bacharach et al.).

Implications

Implications for Educators

This study has demonstrated that mixed-age grouping in early childhood education should be considered as a technique for providing effective, developmentally appropriate education for young children. In reviewing this

study's findings, it became clear that a majority of educators who currently teach in a multiage program consider it beneficial to young children. This is perhaps the most important reason for early childhood educators to implement a multiage classroom--it is great for children! This research confirmed that, despite the concerns, multiage grouping of young children works.

Nongraded education is grounded in the fact that children grow and develop at different rates. Just as not all twelve-month-old infants can walk, not all five-year-olds are able to identify the letters of the alphabet. This acceptance of young children's developmental differences makes multiage grouping a refreshing alternative to the rigid expectations of traditional classrooms. With renewed interest in early childhood education, especially since the establishment of the NAEYC's developmentally appropriate practices, multiage grouping of kindergarteners with children both older and younger, should be looked at as a viable educational option.

Implications for Further Research

Little research has been done in the specific area of multiage grouping of kindergarten students. With the state-mandated legislation in Kentucky and

Oregon requiring all elementary classrooms to be multiage, perhaps more research will be done in this area. More research will hopefully add support to usage of this developmentally appropriate practice. Research regarding the benefits and concerns a multiage program has for teachers would also add to educators' understanding of the multiage philosophy.

Many changes appear to be forthcoming for kindergarten teachers, such as fully funded, all day programs. It would be interesting to survey kindergarten teachers who have not had experience teaching in a multiage program to determine if mixed-age groupings might be of interest to them.

It would be interesting to conduct research on multiage education with kindergarten-age students using a control group (one or more kindergarten classes taught in a traditional graded classroom) and an experimental group (one or more multiage classes which had kindergarten-age students in it). A rating scale could be developed (perhaps based in part on some of the items developed for this study's questionnaire) to determine what qualities to look for in the students at the beginning and ending of a school year. The results would supply early childhood educators with a comparison of graded and nongraded education.

Concluding Statement

"If Rip van Winkle woke up today, the only thing he would recognize would be our schools" (D. Snyder, personal communication, October 11, 1997). These words may cause the reader to smirk, however they ring very true. It is a sad commentary on our educational system that change is so slow. Multiage education offers schools the chance to change for the better. The research is overwhelmingly supportive of the usage of multiage grouping of children in schools.

Hopefully, this study has provided some further insight into the benefits a multiage program has to offer kindergarten-age children. As stated by two elementary teachers who team teach in a multiage setting, "children did not think multi-age grouping was all that unusual. Their classroom had just caught up with the rest of their lives" (Gutloff, 1995, p. 22).

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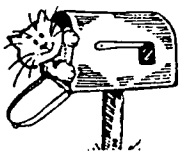
Appendix A

ADVANCE POSTCARD



September 5, 1997

Dear Kindergarten Teacher,

The week of September 15, 1997, you will receive a survey about the effects of mixed-age grouping on kindergarten students as part of the practicum work for my Masters in Early Childhood Education.

Please fill out the survey as soon as you receive it in your school mailbox. Your contribution is not only an important part of my research, but will add to the professional body of knowledge about multiage education.

A fellow kindergarten teacher,

Patricia Tercek

Appendix B

COVER LETTER

September 12, 1997

Dear Kindergarten Teacher,

I am a fellow kindergarten teacher working on my Masters Degree in Early Childhood Education. As part of my degree requirements, I am conducting research to examine the effects of mixed-age grouping on kindergarten students. You are part of an elite group of public and private kindergarten teachers working in a multiage setting to whom this survey is being sent.

The enclosed questionnaire contains three parts. The first part is concerned with why and how your school went about implementing a multiage approach. The next two parts focus on the benefits and concerns of mixed-age grouping to kindergarten students.

The questionnaire will take approximately 15 minutes to complete. Your contribution will be a way to express your professionalism and response to mixed-age education. Be assured that all responses will be kept confidential. No names, schools, or individual information will be identified in my printed research.

PLEASE RETURN YOUR COMPLETED QUESTIONNAIRE BY SEPTEMBER 30, 1997 IN THE ENCLOSED POSTAGE PAID ENVELOPE.

If you have any questions about any of the questionnaire items or about my research, please feel free to call me at (330) 493-4528 (home). Thank you for your valuable assistance and cooperation!!

Sincerely,

Patricia Tercek
Fellow Kindergarten
Teacher and Graduate Student

Appendix C

MIXED-AGE GROUPING QUESTIONNAIRE

PLEASE TELL ME MORE ABOUT YOURSELF.

YOUR GENDER: ___ M ___ F

YOUR AGE:

___ under 25
___ 25 - 39
___ 40-59
___ 60 or over

HIGHEST DEGREE EARNED:

___ Bachelor's
___ Master's
___ PH. D.
___ Other _____

TYPE OF CERTIFICATE YOU HOLD:

_____

TYPE OF SCHOOL IN WHICH YOU TEACH:

____ Public
____ Private

NUMBER OF YEARS YOU HAVE BEEN TEACHING (INCLUDE THIS YEAR):

_____

NUMBER OF YEARS YOU HAVE TAUGHT KINDERGARTEN (INCLUDE THIS YEAR): _____

NUMBER OF YEARS YOU HAVE TAUGHT IN A MULTIAGE SETTING (INCLUDE THIS YEAR): _____

WITH WHAT AGE OR GRADE ARE YOUR KINDERGARTENERS GROUPED?

_____

HOW MANY STUDENTS ARE IN YOUR MIXED-AGE GROUP?

____ Kindergarten-age students
____ Students of another typical "graded" age

DO YOU TEAM TEACH IN YOUR CLASSROOM?

_____YES _____NO

WOULD YOU LIKE TO HAVE YOUR NAME & SCHOOL ADDED TO A LIST OF EARLY CHILDHOOD EDUCATORS WHO ARE CURRENTLY IMPLEMENTING A MIXED-AGE GROUPING IN THEIR SETTING?

___ NO
___ YES (IF YOU CHECK YES, PLEASE PRINT YOUR NAME, SCHOOL NAME, SCHOOL ADDRESS & PHONE NUMBER ON THE ENCLOSED INDEX CARD. RETURN THE CARD TO ME WITH YOUR COMPLETED SURVEY & I WILL SEND YOU A LIST OF THE TEACHERS WHO ARE ON THE LIST.)

LET'S NETWORK! THERE'S STRENGTH IN NUMBERS!!!!!!

TIME TO CONCENTRATE...**Please rate how important each of the following reasons was in your school's decision to implement a mixed-age program. Circle the number that most closely represents your rating of the item's importance.**

	1 NOT IMPORTANT	2 NOT VERY IMPORTANT	3 FAIRLY IMPORTANT	4 VERY IMPORTANT	5 EXTREMELY IMPORTANT
1. Benefits children.	1	2	3	4	5
2. Encourages appropriate practices	1	2	3	4	5
3. Encourages teachers to be more student-centered	1	2	3	4	5
4. Reduces competitive pressures on children	1	2	3	4	5
5. Develops peer learning	1	2	3	4	5
6. Facilitates flexible student pacing	1	2	3	4	5
7. Promotes family-like climate	1	2	3	4	5
8. Result of external forces such as state legislation or grant funding	1	2	3	4	5
9. Result of enrollment figures	1	2	3	4	5

Please list below other reasons that were influential in your school's decision to implement a mixed-age grouping.

_____

_____

_____

_____

_____

YOU'RE DOING GREAT™ **What ingredients do you feel are necessary for successful implementation of a multiage program that includes kindergarteners?**

	1 NOT IMPORTANT	2 NOT VERY IMPORTANT	3 FAIRLY IMPORTANT	4 VERY IMPORTANT	5 EXTREMELY IMPORTANT
1. A developmental curriculum designed around the specific needs of children	1	2	3	4	5
2. Pre-implementation discussions	1	2	3	4	5
3. Parent knowledge & support	1	2	3	4	5
4. Training for teachers in multiage philosophy	1	2	3	4	5
5. On-going staff development	1	2	3	4	5
6. Time for teachers to collaborate, plan & share ideas	1	2	3	4	5
7. Proceeding slowly	1	2	3	4	5
8. A supportive principal	1	2	3	4	5
9. Visiting existing multiage programs/sites	1	2	3	4	5

Please list below other ingredients that you believe to be important for the successful implementation of mixed-age grouping with kindergarteners.

YOU'RE HALFWAY DONE!!! **Please mark the benefits a multiage program offers kindergarten children.**

	1 NOT A BENEFIT	2 A SLIGHT BENEFIT	3 A BENEFIT	4 AN IMPORTANT BENEFIT	5 A MAJOR BENEFIT
1. Focus is on the child & child-centered learning	1	2	3	4	5
2. Children's uneven developmental levels more readily accepted	1	2	3	4	5
3. Cooperation outweighs competition	1	2	3	4	5
4. Older children act as models for younger ones	1	2	3	4	5
5. Self concept & self esteem improve	1	2	3	4	5
6. Social skills improve	1	2	3	4	5
7. Leadership skills develop	1	2	3	4	5
8. Language development improves	1	2	3	4	5
9. Tracking is avoided	1	2	3	4	5
10. Retention is avoided	1	2	3	4	5

Please list below other benefits that have occurred in your classroom because of the mixed-age grouping.

_____

_____

_____

_____

_____

THIS IS IT!!!! **Finally, please rate your concerns about students.**

	1 NOT A CONCERN	2 A SLIGHT CONCERN	3 A CONCERN	4 AN IMPORTANT CONCERN	5 A MAJOR CONCERN
1. Combining older & younger children may make older children appear "slow"	1	2	3	4	5
2. Older children may not be sufficiently challenged	1	2	3	4	5
3. Developmental differences among students	1	2	3	4	5
4. Older children may be exploited by younger ones' persistent desire for help	1	2	3	4	5
5. Younger children may feel intimidated by older classmates	1	2	3	4	5

Please share below other concerns you have about the mixed-age grouping.

_____
_____
_____
_____

Please write below anything else you would like to share about your multiage setting.

_____
_____
_____

THANK YOU FOR COMPLETING THE SURVEY!
CONFIDENTIALITY OF ALL RESPONDENTS IS GUARANTEED.

PLEASE RETURN THE SURVEY IN THE ENCLOSED POSTAGE PAID ENVELOPE BY 9-30-97.

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