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A STUDY TO DETERMINE WHICH FACTORS CONTRIBUTE TO THE IMPLEMENTATION OF A SUCCESSFUL PRIMARY MULTIAGE/NONGRADED PROGRAM

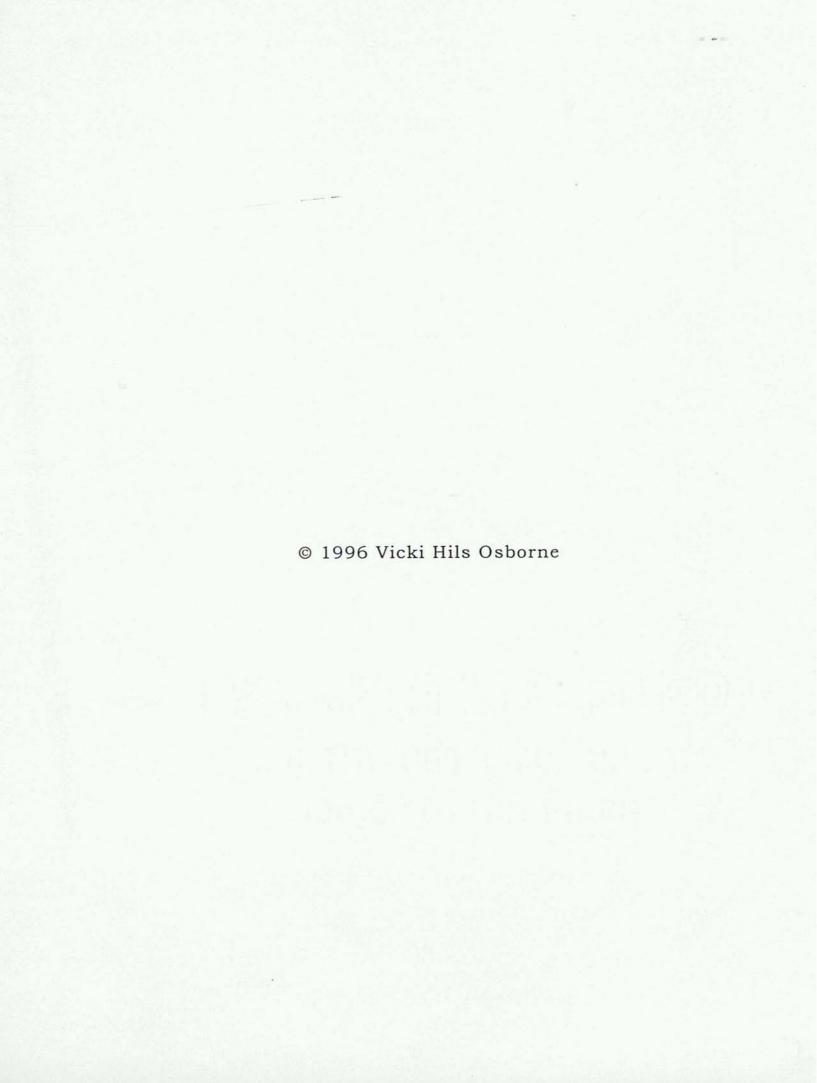
by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of Doctor of Education
in the Department of Educational Services
in the College of Education
at the University of Central Florida
Orlando, Florida

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ABSTRACT

Child growth and development pedagogy suggests that not all children are ready to learn the same thing, at the same time, in the same way. Multiage/nongraded programs allow pupils to advance from one concept or skill level to the next as they are ready, regardless of age or grade, which results in continuous progress. Multiage/nongraded education has a solid foundation of research and experience to support its use. However, many questions still exist regarding the factors that contribute to the implementation of a successful primary multiage/nongraded program.

The purpose of this ethnographic study was to identify the

(a) critical attributes of a successful multiage/nongraded

program, (b) strategies necessary for successful

implementation, (c) inservice training needed by teachers,

(d) obstacles encountered during implementation, (e)

advantages and disadvantages of a multiage/nongraded

program for students, and (f) advantages and disadvantages of

a multiage/nongraded program for teachers. Data from 58 teachers of primary multiage classes in a large public school district in central Florida were collected during the 1995-96 school year using focus group interviews. An Interview Guide and a demographic questionnaire were developed to help gather data. Data collection procedures for this ethnographic study utilized a series of focus groups, field notes, and audiotape recordings. Data from the interviews were categorized, analyzed, interpreted, and summarized.

Two of the critical attributes of a multiage/nongraded program discussed in this study were developmentally appropriate practices and continuous progress. Other critical attributes included authentic assessment, team teaching, and varied instructional strategies such as integrated thematic teaching and whole language.

Implementation strategies discussed were the decisionmaking process involved in choosing to implement the
multiage/nongraded program, the selection of the multiage
teacher, professional development activities, student selection,
and parental involvement. A large portion of the study was

devoted to a discussion of the obstacles encountered during implementation of the multiage/nongraded program.

Advantages and disadvantages of a multiage setting for students and teachers were discussed in the review of literature and in the data analysis of participants' responses during the interviews.

Implications for practice were included. A list of recommendations for future study was also included.

DEDICATION

This work is lovingly dedicated to

my Mom and Dad, Doris and John Hils, and my sister and brother-in-law, Lynne and Billy May who gave me my "roots and wings",

my husband, Jerry Osborne, and my daughter and son-in-law, Penny and Lee Dockery, who gave me support and encouragement,

and

my grandson, Jordan Tyler Osborne, and my granddaughter, JennaLee TaraAnn Dockery, who are my shining stars and our hope for the future!

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CHAPTER I

NATURE AND SCOPE OF THE STUDY

Introduction

"The organization of schooling appears to proceed as if we had no relevant knowledge regarding the development of children and youth" (Goodlad, 1984, p. 323). Child growth and development pedagogy suggests that not all children are ready to learn the same thing, at the same time, in the same way. Yet legislatures and school boards specify what all students will be taught and expected to learn at each grade level. Regardless of what students bring to the school setting, they are expected to conform to the demands of this structured environment and inflexible curriculum rather than having their needs met. When students do not attain these pre-determined grade level skills and concepts, they are retained. The following year they are presented with the same grade level curriculum regardless of their prior knowledge or developmental readiness. It is assumed that the children have

failed, rather than that the system has failed to meet their needs.

Graded education is based on the assumption that students of the same chronological age "acquire similar knowledge in the same way at the same time" (Bacharach, Hasslen, & Anderson, 1995, p. ix). Teachers in these classrooms impart a prescribed body of knowledge to students on a predetermined timeline. In contrast, a multiage/ nongraded program focuses on developmentally appropriate curricula. In these settings, teachers "can provide a wide range of activities to meet a diversity of abilities and interests and can accept a variety of performance competencies as valid" (Bacharach et al., 1995, p. ix). Multiage/nongraded programs allow pupils to advance from one concept or skill level to the next as they are ready, regardless of age or grade, which results in continuous progress. Multiage programs utilize developmentally appropriate practices to meet individual needs and ensure the success of all students. Multiage/nongraded programs celebrate differences in individuals -- their rates of

learning, learning styles, interests, personalities, and backgrounds. Ostrow (1995) stated that multiage classrooms:

Demonstrate what children are able to do. . . . They break down barriers of age and gender. .Children learn to respect each other as individuals. . . . Children at their progress own rate. . . . serve as one learning approach that teachers look at children to encourages individuals. . . . feeling of community. . . . and respect. (p. 4-5)

Multiage/nongraded education is not a new concept. It has a solid foundation of research and experience to support its use. The vast majority of educators and parents who have worked with it are enthusiastic. However, nongraded primary education is often met with resistance from those who have not yet experienced it. Research shows that it is human nature to approve the structure with which one is most familiar. Therefore, the task is to help others become as comfortable with nongradedness as they are with the traditional graded approach. There are many educators and others who still have important questions about the critical attributes of a multiage/nongraded program and the strategies most necessary for successful implementation. This study was undertaken to address those questions.

Statement of the Problem

This study sought to identify the (a) critical attributes of a successful multiage/nongraded program, (b) strategies necessary for successful implementation of the program, (c) inservice training needed by teachers to implement a successful program, (d) obstacles encountered during implementation, (e) advantages and disadvantages of a multiage/nongraded program for students, and (f) advantages and disadvantages of a multiage/nongraded program for teachers.

Definition of Terms

For the purpose of clarification, the following definitions were used throughout the study:

- 1. Ability Grouping/Tracking -- Ability grouping and tracking are forms of grouping that are characterized by educators making some rather global judgment about how smart students are based on IQ and past performance (O'Neil, 1992).
- 2. <u>Alternative Assessment</u> -- Alternative assessment refers to direct examination of student performance on

significant tasks that are relevant to life outside of school rather than a score on a multiple-choice or standardized test. The focus is on processes (i.e., learning logs and self-assessment checklists), products (i.e., diaries, portfolios, exhibits, and journals), and performances (i.e., videotapes and taped readings) of students (Worthen, 1993). The tasks are frequently open-ended and judgment is required to evaluate the level of performance (Davis, 1992).

- 3. Combination Class/Split Class/Multigrade Grouping -The term multigraded refers to the teaching of more
 than one grade level in the same classroom, retaining
 grade level designations, and teaching a separate
 curriculum to each group of students (Gaustad,
 1992b). The terms combination class, split class,
 and multigrade grouping are used interchangeably in
 this study.
- 4. Constructivist Theory/Active/Hands-On Learning -The constructivist theory suggests that learning is an
 active process in which prior knowledge, interests, and

self-motivated purposes play major roles in learning (Ganapole, 1989). Constructivists believe that human beings acquire knowledge by building it from the inside through interaction with the environment (Kamii, Manning, & Manning, 1991).

- Continuous Progress -- When children move along a continuum from easier to more difficult material at their own, varying rates of learning, they are making continuous progress (Gaustad, 1992b).
- 6. Developmentally Appropriate Practices -Developmentally appropriate practices are those
 strategies implemented by school personnel which are
 age and individual appropriate (Bredekamp, 1987). Age
 appropriateness is based on the universal and
 predictable sequences of growth that have been
 documented through human development research.
 Individual appropriateness takes into consideration the
 unique patterns of growth, personality, learning styles,
 and culture of each child.

- 7. Flexible Grouping -- Flexible grouping is defined as the frequent reorganizing of children for specific and temporary purposes such as skill needs, interests, and/or learning styles (Gaustad, 1992a).
- 8. Looping -- Looping is a term used to describe a grouping practice in which a single-grade class stays together like a family and is promoted with the teacher for two and sometimes three years (Grant, Johnson, & Richardson, 1995).
- 9. Multiage/Nongraded/Ungraded Grouping -- Nongraded grouping is the practice of teaching children of different ages and ability levels together without dividing them or the curriculum into steps labeled by grade designations (Gaustad, 1992b). The terms multiage, nongraded, and ungraded are used interchangeably in this study.
- 10. Primary -- Primary refers to that part of the elementary school program in which children are enrolled from the time they begin school until they are ready to enter fourth grade (Burruss & Fairchild, 1993). Generally,

primary students are those students who are enrolled in kindergarten, first, second, and third grades and are 5, 6, 7, 8, and 9 years of age.

Limitations of the Study

The scope of this study was limited by the following:

- The participants in this study consisted of instructional personnel who were employed as teachers of public school primary multiage classes in a large central Florida school district during the 1995-96 school year.
- Responses used in data analyses were elicited from the participants through means of focus group interviews and a demographic questionnaire.
- 3. This study was limited to those school district personnel identified as teachers of primary multiage classes and any generalizations or inferences beyond this population should be made only after careful consideration of the conditions associated with the characteristics of these classroom teachers.

4. There is no school district definition for a multiage/
nongraded program, therefore, the identification of
multiage classes was determined by a building level
administrator.

Assumptions of the Study

Several assumptions were made within the context of this study:

- This research was based on the assumption that the critical attributes identified in the review of literature were important to the implementation of a successful multiage/nongraded program.
- This research was also based on the assumption that the implementation strategies identified in the review of literature were necessary for a successful multiage/nongraded program.
- It was assumed that teachers of multiage classes were knowledgeable regarding the concept of multiage/ nongraded programs.
- 4. It was also assumed that all interviewees and survey respondents conveyed their honest opinions.

Significance of the Study

It was anticipated that:

- The results of this study could provide a basis for making decisions regarding the appropriateness of implementing a multiage/nongraded program in other schools.
- 2. The critical attributes of a multiage/nongraded program would be identified for future implementation.
- 3. Those strategies which contributed to the successful implementation of a multiage/nongraded program could be identified and might be useful in future implementations of multiage/nongraded programs.
- 4. Those strategies which hindered the implementation of successful multiage/nongraded programs would be identified so they could be avoided in the future.
- 5. The results of this study could provide useful data to those persons planning professional development activities for instructional personnel who will be implementing multiage/nongraded programs.

Conceptual Framework

In a multiage/nongraded class, students make continuous progress rather than being promoted once a year. The emphasis is on what each child can do rather than on what each cannot do. The multiage program supports children as learners. Children in a multiage/nongraded class are supported socially also (Chase & Doan, 1994). A multiage/ nongraded program provides stability and continuity for students. Because students and teachers spend at least two years together, less time is spent trying to determine teaching or learning styles and where to begin instruction. Multiage classes allow flexibility for students. Teachers expect individual differences and diversity is encouraged. Expectations are different for different students. Multiage classes also foster the growth of social skills through experience and group work. In a multiage class, the curriculum is integrated with a focus on the learner rather than on the content. A multiage organization de-emphasizes competition and fosters cooperation. It also provides a natural, real-life learning environment.

Findings from three main sources support the multiage/
nongraded approach: research in child development and the
learning process, research focusing on the effects of mixed-age
grouping, and studies comparing graded and nongraded
programs (Gaustad, 1992b).

According to Gaustad (1992b), research in child development has revealed that young children learn by doing and therefore, appropriate primary education programs provide children with opportunities for active, hands-on learning rather than passive listening or rote learning. In addition, she stated that children learn at different rates and therefore "education must be flexible in its expectations for the timing of children's achievement, rather than expecting all children to progress at a uniform rate" (p. 14).

Just as children differ in their rates of growth and learning, they also differ in their learning styles. Gardner (1983) noted that an ideal curriculum would afford opportunities for development of all seven intelligences rather than only the two most common--linguistic and mathematical/logical.

The results of brain research indicate that the brain organizes knowledge based on past experience and therefore information is more meaningful if taught in context. Children do not divide knowledge into subjects; their thinking is integrated. Skills presented through an integrated curriculum using projects and activities are learned much more easily (Gaustad, 1992b). The emotional state of the learner also affects learning. Children who are happy, secure, motivated, and in a noncompetitive environment are more likely to achieve success (Gaustad, 1992b).

Research on mixed-age grouping indicates that there are advantages for primary-level children, whatever their age and ability. In general, children naturally select friends from a wide age range. Interactions between age groups provide opportunities for children to practice leadership and followership skills, improve social skills, work cooperatively, master problem-solving skills, and learn from each other (Gaustad, 1992b). After reviewing studies comparing graded and nongraded programs, Miller (1990) concluded that multiage or multigraded classes are as effective as single-grade

classes in terms of academic achievement and superior in terms of student attitudes toward school and self.

One of the outcomes of the graded educational program is that teachers must make decisions each year regarding the promotion or retention of students for the next school year. According to Balow and Schwager (1990), research on the effectiveness of retention indicated that promotion has been more effective than retention for increasing achievement and fostering personal, social, psychological, and emotional development. Regardless of the research and potential for negative effects, pupils in single grade classes who have not mastered skills are retained due to grade level expectations (Holmes & Matthews, 1984).

Effective implementation of a successful multiage/
nongraded program requires a new set of attitudes and skills,
as well as an understanding of how children learn (Bacharach
et al., 1995) and an understanding of specific instructional
and implementation strategies. In order to assure success of a
multiage/nongraded program, opportunities for appropriate
inservice training are necessary before implementation. When

the state of Kentucky mandated multiage primary classes statewide, it also recognized the vital role that professional development training plays in innovation implementation and "a comprehensive program of professional development opportunity was implemented and financed under authority of the Kentucky Education Reform Act." (Settle, 1995, p. 2). Knowledge regarding the obstacles to successful implementation can be used during the planning phase of implementation and can therefore be avoided (Grant, Johnson, & Richardson, 1995).

This study was designed to determine the critical attributes of a multiage/nongraded program and the implementation strategies necessary for a successful multiage program. In addition, this study was designed to identify obstacles to successful implementation, identify appropriate staff development activities, and identify the advantages and disadvantages of multiage/nongraded programs for students and teachers.

Purpose of the Study

The purpose of this study was to obtain information relative to teachers' perceptions regarding the factors which contributed to the implementation of a successful multiage/ nongraded program at their work site. Specifically, this study was undertaken to determine how the decision to implement the multiage/nongraded program at each participant's work site was made, what planning and preparation for implementation occurred including staff development activities, and what instructional strategies were necessary for successful implementation. In addition, demographic information about the multiage teachers was gathered to determine if there was a relationship between personal characteristics, experience, or educational background and the implementation of a multiage/nongraded program.

Research Questions

The research questions which guided this study were:

 What were the critical attributes of a successful primary multiage/nongraded program?

- 2. What strategies were necessary for the implementation of a successful primary multiage/nongraded program?
- 3. What problems were encountered during the implementation of a primary multiage/nongraded program?
- 4. What staff development activities were most effective in preparing teachers for implementing a primary multiage/nongraded program?
- 5. What were the advantages and disadvantages of a primary multiage/nongraded program for students?
- 6. What were the advantages and disadvantages of a primary multiage/nongraded program for teachers?

<u>Population</u>

The population for this study consisted of elementary public school teachers of primary multiage classes as identified by school administrators during the 1995-96 school year in a large central Florida school district who participated in focus groups and who completed a brief survey instrument.

Data Collection and Instrumentation

Based on the review of the literature, an Interview Guide for focus groups (Appendix A) was developed to gain participants' perceptions regarding the instructional strategies they considered to be an integral part of a successful multiage/nongraded program and the implementation strategies they felt were most necessary for a successful multiage/nongraded program. A short questionnaire (Appendix B) was developed to gain demographic information about the teachers in the primary multiage classrooms. Data collection procedures for this ethnographic study utilized a series of focus groups, field notes, and audiotape recordings. Data from the interviews were categorized, analyzed, interpreted, and summarized as described by Krueger (1994).

Organizational Design

Chapter I of this study dealt with the problem of the study and its significance. Chapter II presents a review of literature and research related to the problem of the study. Chapter III contains the method and procedures used during the research. Chapter IV contains the analysis of data received from the

participants. Chapter V contains the conclusions drawn as a result of this study and recommendations for future studies.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

This study sought to describe the critical attributes of successful multiage/nongraded programs and the implementation strategies that contributed to their success. In addition, this study was designed to identify obstacles to successful implementation, identify appropriate staff development activities, and identify the advantages and disadvantages of multiage/nongraded programs for students and teachers.

The review of related literature provides a summary of previous research and theory that formed the basis for this ethnographic study. The review of literature and related research focuses on the: (a) history of graded and nongraded programs, (b) current literature regarding the effects of gradelevel retention, (c) current literature regarding the effects of mixed-age grouping, (d) studies comparing graded and

nongraded programs, (e) current literature regarding the critical attributes of a successful multiage program, and (f) literature regarding the implementation strategies of successful multiage/nongraded programs.

<u>History of Graded and Nongraded Programs in the United</u> <u>States</u>

Instruction in early institutions of learning was highly individualized. Classes, and in some cases whole schools, usually contained less than ten students. Teachers were not properly prepared to teach and the curriculum consisted of whatever they were able to teach.

Most often, the students were from wealthy families.

Attendance was not required and so learning began where it was last interrupted (Goodlad & Anderson, 1987). However, these one-room schoolhouses offered certain attributes that were educationally sound. Children stayed with the same teacher and students for more than one year, which provided a stable environment. The differences in ages and abilities of the students allowed optimum collaboration. The more experienced students could assist younger ones and serve as role models, challenging them intellectually and socially. In

addition, there was no apparent ceiling on what content was taught, which benefited older students by design and younger students more incidentally (Kasten & Clarke, 1993).

Due to the low cost of schooling, the movement toward a free public education for everyone was encouraged, and the graded system was used to provide an orderly means of classifying the many children who would be coming to school. The driving force behind grade-level designations seemed to be efficiency. In addition, since teacher training was lacking, grade levels made it possible for each teacher to specialize in one grade-level curriculum and not have to learn the entire curriculum (Anderson & Pavan, 1993). The routinized and systematic approach of gradedness also made it easier to supervise teachers. Textbooks, such as The McGuffey Readers, which were introduced in 1836 and were graded through six levels, also had considerable impact on schools becoming graded.

In 1843, Horace Mann, following the example of apparently successful graded schools in Germany, advocated the graded school concept. The Quincy Grammar School in Boston

marked the emergence of the graded school in the United States in 1848. However, by 1868, educators had already begun to question the graded concept and its appropriateness for children (Anderson & Pavan, 1993). Among the most prominent of these educators was John Dewey, who challenged the graded educational practices by encouraging the use of individual experiences and the elimination of arbitrary classifications of grades, textbooks, and subject matter. At John Dewey's Laboratory School at the University of Chicago, which opened in 1893, interest-centered curriculum, pupilinitiated activities, and avoidance of comparisons of the work of children were advocated (Goodlad & Anderson, 1987).

Over the years, several attempts have been made to break down the graded structure. The Pueblo Plan in 1888 encouraged individual progress. The Batavia Plan employed additional teachers to give special help to slow learners, and older students were given additional help in Colorado. Both the Winnetka and Dalton Plans used an individualized task approach (Goodlad & Anderson, 1987). Anderson (1993) stated, "It is strange that the graded school, with its

overloaded, textbook-dominated curriculum, and its relatively primitive assumptions about human development and learning, has held its ground this long" (p. 73).

The graded structure persisted without much interference until 1957 when the successful launch of the Soviet satellite, named Sputnik, prompted a reexamination of the United States' educational system (Gaustad, 1992a). During the 1960s, 70s, and 80s, nongradedness and open education became a bandwagon on which educators jumped in an attempt to bring meaning and change to the existing educational system (Maling, 1990). The reform failed due to an inadequate understanding of the concept; a lack of training for teachers in developmental theories; a lack of practical training; a lack of support from the rest of the educational system including grade-level textbooks, mandatory standardized testing, and lack of planning time; a lack of support from parents and the community; and a move back to basics (Gaustad, 1992a).

The nongraded education movement of the 1990s differs from that of the 1960s. More recent research in child

development and learning theories gave nongraded education a much stronger foundation. The "Inventory of Educational Beliefs and Ideas" and the "Principles of Nongradedness" contained in Nongradedness: Helping it to Happen by Anderson and Pavan (1993), provided a conceptual framework which articulated the goals, organizational framework, and operational elements such as curriculum, teaching methods, and evaluation in multiage/nongraded programs. These two instruments were widely recognized and helped clarify the misunderstandings of the earlier attempt.

In addition, there were many others in the educational field who were moving in the same direction. The National Association for the Education of Young Children (NAEYC) supports developmentally appropriate practices at the primary level (Bredekamp, 1987). The (NAESP) National Association of Elementary School Principals (1990) also supports developmentally appropriate practices for primary students.

Legislation developed in 1990 by the state of Kentucky
mandated that all primary classes be nongraded. That model
of primary education was grounded in nearly 5 decades of

educational research (Settle, 1995). The state of Oregon considered implementing nongraded primary education (Gaustad, 1992b). Individual schools started pilot programs and integrated nongraded elements into their curricula (Gaustad, 1992a).

Effects of Grade-Level Retention on Students

One of the premises of graded education is that students of the same chronological age are basically at the same level of development, can be taught in the same way, and will progress at the same rate. Soon after the implementation of graded education it became obvious that some students were ready to master the curriculum and others needed additional experiences. This latter group caused concern regarding the effectiveness of instruction, and therefore retention in grade, or failure, was introduced as a solution.

The effects of grade-level retention on student achievement and personal adjustment have been documented. Evidence collected over many years of research demonstrated that retention had no benefits for students (Balow & Schwager, 1990). Holmes and Matthews (1984) found that students who

were promoted did better than retained students in the areas of academic achievement, personal adjustment, self-concept, and attitude toward school. In a study to determine the effects of kindergarten retention, Shepard and Smith (1987) found that there was no benefit for retained pupils in the areas of academic progress or relationships with peers. In a metaanalysis review of the promotion/retention literature, Balow and Schwager (1990) found that retained pupils, when compared to their control groups, were lower in achievement and that retention had a negative effect on language arts, reading, mathematics, work study skills, social studies, and grade point average. In addition, retained pupils were significantly lower than the promoted pupils in social and emotional adjustment, behavior, self-concept, and attitudes toward school (Balow & Schwager. 1990).

Research by Balow and Schwager (1990) demonstrated that neither promotion nor retention was beneficial to students if it was not accompanied by effective programmatic interventions such as extra year programs. School districts around the nation recognized the need for interventions and devised ways

they thought would help prevent children from failing. Some added an extra year before kindergarten (i.e., developmental kindergarten or junior kindergarten); some districts added an extra year after kindergarten (i.e., transitional kindergarten or junior first grade); and others added both years. Some school districts even labeled these children who needed another year of school as learning handicapped in order to get additional funding (Connell, 1987). However, Shepard and Smith (1987) stated that there was no difference between at-risk but promoted children and children who participated in an extrayear program.

Test scores indicated that a wide range in individual student ability existed in every class. Yet grade-level expectations have made it virtually impossible for teachers to implement curriculum and instruction modifications in order to meet those individual needs. According to Cuban (1989):

The structure of the school is not flexible enough to accommodate the diverse abilities and interests of a heterogeneous student body. Programs are seldom adapted to children's individual differences. Instead, schools seek uniformity, and departures from the norm in achievement and behavior are defined as problems. . . One of the most inflexible of the structures of schooling is the graded school. . . . The

implicit theory underlying the graded school is that educational quality comes through uniformity....

The larger issue and my central point, however, is this: the basic design of the graded school has trapped both staff members and at-risk students in a web of shared failure. (p. 781)

Principals recognized this dilemma. The National Association of Elementary School Principals (NAESP) reported that two-thirds of principals responding to a 1990 survey believed that abolishing traditional grade levels for the first five years of school would be advantageous to restructuring elementary education (Davis, 1992).

One alternative to the graded concept is the multiage/
ungraded school which supports the philosophy that it is the
responsibility of the school to meet children where they are in
their growth process and to provide a developmentally
appropriate program in which they can all learn and not fail
(Appalachia Educational Laboratory, 1991).

Effects of Mixed-Age Grouping

A review of the literature on the effects of mixed-age grouping indicated that there are many social and cognitive benefits for students. Several disadvantages for students are

also identified. In addition, several important benefits for teachers were noted. The only disadvantage for teachers identified in the literature is the large amount of time needed for planning. A discussion of each of the advantages and disadvantages for students and teachers follows.

Social Benefits for Students

One of the most obvious benefits of a multiage program is that students become members of a group that accepts them as they are and builds on their strengths and weaknesses.

Because they spend more than one year with their teacher and the other students, expectations are constant and bonding, meaningful relationships, trust, effective communication, and continuity of caring occur naturally.

Multiage groups provide a wide range of competencies with opportunities to develop relationships and friendships with others who match, complement, or supplement each individual's own needs. In mixed age groups, older children are perceived as contributing and younger children as needing their help. These perceptions create a climate of cooperation which minimizes competitiveness and often results in reduced

discipline problems (Jeanroy, 1996; Katz et al., 1990; & Lodish, 1992). Pratt (1986) stated, "The general picture that emerges from studies is one of increased competition and aggression within same-age groups and increased harmony and nurturance within multiage groups" (p. 112).

In a multiage/nongraded setting older children exhibit leadership skills such as consensus-building, organization, and decision-making. Also, each child can practice prosocial behaviors such as sharing, taking turns, giving help, giving attention, affection, submission, reciprocation, and facilitating interactions (Katz et al., 1990). Older children's acceptance of responsibility and self-regulation are also enhanced. For instance, if an older child who is resistant to adult authority assists younger ones in compliance, the older child may become more compliant (Katz et al., 1990).

Younger students engage in more interactive and complex play when older students are accessible to them. The older students operate well in younger children's zone of proximal development as conceptualized by Vygotsky (Katz et al., 1990). According to Katz et al. (1990):

The zone of proximal development is the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers. (p. 18)

At-risk students are more likely to exhibit prosocial behavior and offer instruction to younger children than agemates (Katz et al., 1990). In addition, role models and peer pressure by older students may positively impact socialization of at-risk students (Kasten & Clarke, 1993).

Cognitive Benefits for Students

Optimal cognitive conflict in a child arises from his interaction with children of different levels of cognitive maturity, which stimulates cognitive growth by challenging him to assimilate and accommodate new information.

Vygotsky maintains that internalization occurs when concepts are actually transformed and not merely replicated (Katz et al., 1990). The interaction between those who hold conflicting understandings leads to the restructuring of old understandings and the internalization of new understandings by the less informed member. The discrepancy between what

an individual can do with and without assistance can be the basis for cooperative efforts that can result in cognitive gains (Katz et al., 1990).

In a multiage class, peer teaching often occurs when one child takes time to teach another child the very thing with which he or she has had difficulty understanding. The benefit for the child being helped is obvious. The child doing the teaching must bring his or her knowledge to a most conscious level and synthesize it in order to teach it. In addition, having a role model allows developing children to have a vision of where their knowledge and skills are headed. Vocabulary is geared toward the upper end of the class, therefore children are exposed to more advanced vocabulary (Pratt, 1986).

A multiage class allows for children's uneven and individual development. Young children are not equally mature in all areas of development at the same time (Milburn, 1981). The multiple-years relationship that exists in a multiage classroom allows teachers to plan effectively for each child's individual continuous progress. A multiage class allows children's development to ebb and flow in a natural way

and gives them the opportunity to succeed rather than fail--a situation that can cause emotional, social, or intellectual damage (Milburn, 1981).

Disadvantages for Students

Lodish (1992) noted three possible disadvantages for students in a multiage/nongraded setting. The first possible disadvantage was that opportunities to develop appropriate friendships may not exist if there were not enough students. Another possible disadvantage was that there may be a tendency to provide fewer challenges to older students. He also noted that some competitive young children may be frustrated by the perceived gap between their work and that of older students.

Advantages for Teachers

The most obvious benefit of nongradedness for teachers is that they are given the freedom and permission to teach students where they are rather than at some predetermined level based on grade in school. For years, in trying to meet the needs of individual students, effective teachers have

consciously circumvented graded practices by compromising, inventing, adapting, and disregarding grade-level standards (Goodlad & Anderson, 1987).

Miller (1994) found that teaching in an elementary multiage class improved the rewards for teaching because students seemed more confident and motivated to learn, and therefore the number of behavior problems was reduced.

Miller (1994) also found that peer modeling and leadership opportunities contributed to the reduced number of discipline concerns. Overall, there was more time left for instruction.

Multiage teachers in Miller's study (1994) reported that the continuity of a multiage setting saves time in ways that facilitate classroom management and enhance learning.

Continuity across years is created, enabling teachers to build on knowledge learned in the past. Team-teaching also reduced the workload, enhanced planning, and allowed greater flexibility (Miller, 1994). Another benefit for teachers identified by Miller (1994) was that the multiage organization of elementary schooling builds healthy, durable relationships among students, teachers, staff, and families.

Disadvantages for Teachers

The most dominant disadvantage of a multiage/nongraded program mentioned by teachers in the literature was the extra amount of time needed to plan for multiple years of curriculum and for implementation of the different teaching strategies (Miller, 1994). In addition, in situations where team teaching is used, time must be provided for the exchange of information and cooperative planning (Gaustad, 1992b). Most of the teacher concerns fell into the category of implementation problems. In fact, Kasten and Clarke (1993) stated, "No teacher has shared with us any concerns that result specifically from the class being multi-aged" (p. 51).

Studies Comparing Graded and Nongraded Programs

The results of studies comparing graded and nongraded programs are generally either inconclusive or favorable to the nongraded approach. Pratt (1986) reviewed 30 studies on multiage grouping in elementary schools conducted between 1948 and 1983. The results suggested that multiage grouping had no consistent effect on academic achievement. However,

students in the multiage group had better self-concepts and attitudes toward school.

Miller (1990) examined quantitative research regarding the effects of multigrade classroom organization in elementary schools and concluded that the data supported the multigrade classroom as an equally effective organizational alternative to single-grade instruction and, depending on subject and/or grade level, significant positive differences may exist. In terms of students' emotional health, Miller (1990) also found that the case for multigrade organization appeared much stronger than the case for single-grade instruction.

In a review of 64 research studies, which were conducted in elementary schools and published after 1967, Pavan (1992) found similar results. She reported that 58% of the studies indicated that the nongraded groups performed better on standardized academic achievement tests than the graded groups and 33% performed as well as the graded groups. In only 9% of the studies did the graded groups do better than the nongraded groups. These results are notable because the curriculum in a nongraded class is adjusted to meet individual

needs and may not cover the same content as traditional textbooks which is what is tested on standardized tests.

Pavan (1992) noted that, in general, students in nongraded classes scored higher than students in graded classes on measures of self-esteem. In 52% of the studies reviewed by Pavan, it was indicated that nongraded schools were better for students in regard to mental health and school attitudes.

Students in nongraded schools were more likely to have more positive self-concepts, higher self-esteem, and better attitudes toward school than students in graded schools (Pavan, 1992).

Of the 64 studies analyzed by Pavan (1992), 17 reported data over several years. She noted that more students from multiage programs entered fourth grade with their entering class (due to lack of retentions in grade level), students in nongraded intermediate programs had more positive attitudes toward school, and the benefits of nongradedness increased as students had longer nongraded experiences.

The research studies reviewed by Pavan (1992) revealed that at-risk students in nongraded classes exhibited better self-concepts and attitudes toward school. In these studies,

Pavan defined at-risk students as underachievers, students of low socioeconomic status, black students, and boys.

Underachievers and students of lower socioeconomic status also showed greater academic achievement when placed in nongraded schools (Pavan, 1992). Pavan noted that students in schools with high implementation of nongradedness had higher academic achievement, more positive attitudes toward school, and better self-concepts than those in schools with low implementation (fewer characteristics) of nongraded education.

Veenman (1995) defined multiage grouping as the deliberate grouping of children with different ages into the same classroom for educational and pedagogical reasons. He summarized the outcomes of 11 studies concerning multiage grouping. Veenman (1995) found that students in multiage classes did not learn more or less than the students in the single-age classes. However, with regard to the noncognitive outcomes, students in the multiage classes tended to score higher on attitudes towards school, personal adjustment, and self-concept, although the differences tended to be small.

Miller (as cited in Gaustad, 1992a) summarized that research shows multigraded classrooms to be as effective as single-grade classrooms in terms of achievement and superior in terms of student attitudes. Goodlad and Anderson (as cited in Gaustad, 1992a) made a stronger statement, "There is simply no research that says graded structure is desirable" (p. 18).

Critical Attributes of a Successful Multiage/Nongraded Program

Although each multiage classroom will look different from the next, certain elements tend to be present in a majority of multiage classrooms. An understanding of the philosophy and rationale behind the multiage/nongraded configuration is basic to a successful program (Bacharach, Hasslen, & Anderson, 1995). Simply mixing different ages of children will not create a successful multiage program. There must be changes in curriculum and instruction as well. The most important reason to implement a multiage/nongraded program is to provide developmentally appropriate practices (Black, 1993) that includes continuous progress (Grant & Johnson,

1995). Authentic assessment; team teaching and planning; and the use of varied instructional strategies such as active/hands-on learning, whole language activities, cooperative learning groups, peer tutoring, flexible grouping, learning centers, and multiple intelligence activities are other components of successful multiage/nongraded instruction.

McLean (1990) stated:

Ungraded schools follow naturally from other developments that have been shaping primary schools in recent years. Continuous progress has always been a fact of school life, but lately it has been given official status and sanction. The idea of curriculum keyed to school years is inconsistent with the approach to the teaching of reading, writing, listening and speaking known as whole language pedagogy, and all sit within a still evolving concept called activity based learning. Implement these with a policy that students with handicaps of various kinds will be taught in regular classrooms as much as possible (mainstreaming), and schooling organized by school year must finally be abandoned. (p. 1)

Developmentally Appropriate Practice

In response to social, economic, and political forces, changes have occurred in early childhood programs that may not necessarily reflect what is good for children. The National Association for the Education of Young Children (NAEYC)

recognized that the field of early childhood education needed to examine its practices in light of current knowledge regarding child development and learning. The result of their reexamination was the 1987 "NAEYC Position Statement on Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth Through Age 8", which was edited by Bredekamp (1987). The rationale behind the position statement, which is 92 pages in length, stated that programs should be tailored to meet the needs of children, rather than expecting children to adjust to the demands of a specific program.

As defined in the NAEYC position statement, the concept of developmental appropriateness has two dimensions: age appropriateness and individual appropriateness. Age appropriateness is based on human development research that indicates there are universal, predictable sequences of growth and change that occur in children during the first 9 years of life. Individual appropriateness is described as understanding that each child is a unique person with an individual pattern

and timing of growth, as well as individual personality, learning style, and family background (Bredekamp, 1987).

The position statement identifies the components of a primary educational program and describes practices as either developmentally appropriate or inappropriate. The position statement contains descriptions of appropriate practices such as integrated curriculum, cooperative learning, continuous progress, recognition of individual differences, active/hands-on learning, flexible grouping, and authentic assessment (Bredekamp, 1987).

Teachers in a multiage/nongraded class use child development knowledge to identify the range of appropriate behaviors, activities, and materials for a specific 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.

Continuous Progress

With continuous progress, students are challenged at the appropriate level, according to their ability to master

intellectual, physical, emotional, and social tasks at progressively more difficult levels. Continuous progress mandates that students should neither spend time on what they have already adequately achieved, nor proceed to more difficult tasks if they have not yet learned material or acquired skills essential to that new level of knowledge (Hunter, 1992).

As Nachbar (1989) observed, "It's quite simple. I teach each child what he or she wants and needs to know next. I build curriculum from where each child is, rather than reeling it out to all children at once from publishers' lesson plans" (p. 69).

Varied Instructional Strategies

Multiage/nongraded programs are merely a way to organize and group children. The key to their popularity focuses on what they allow the teachers to do. They free the teachers to pursue individual student differences and to find ways to meet the needs of each student. Current best practices such as active/hands-on learning, integrated curriculum/thematic teaching, whole language strategies, hands-on mathematics, cooperative learning groups, peer tutoring, learning centers,

flexible grouping, and multiple intelligence strategies can be easily implemented in a multiage/nongraded classroom. A more complete description of each of these strategies follows.

Constructivist Theory/Active/Hands-On Learning

One instructional strategy that is a component of multiage classes is an active/hands-on/constructivist approach to learning. For centuries, educators assumed that children acquired knowledge by internalizing it from the environment. Jean Piaget's Theory of Constructivism shows, however, that children acquire knowledge by constructing it from the inside, in interaction with the environment (Kamii, Manning & Manning, 1991). Children cannot be given knowledge. They must construct it for themselves through continuous action in their environment. Each child's construction of knowledge is personal and unique. Playful activity is the natural method of learning for young children (Davis, 1992). The child in Piaget's theory is not a passive recipient who waits to be instructed in school. For Piaget, children are producers of knowledge who try to make sense of everything they encounter in their environment. Connell (1987) contends that any skill in any

subject can be taught through a child-suitable activity; workbooks are nonessentials.

This theory of how children construct knowledge supports the practices of whole language, shared reading, process writing, invented spelling, integrated curriculum, hands-on mathematics, authentic assessment, and learning centers (Kamii et al., 1991).

Integrated Curriculum/Thematic Teaching

A second instructional strategy of a successful multiage/
nongraded program is thematic teaching/integrated
curriculum. Bridge, Reitsma and Winograd (1993) defined
integrated instruction as "a way to organize the curriculum
around topics, themes, questions, or problems to capitalize on
the natural connections across content areas" (p. 92).
According to Kovalik (1994), integrated thematic instruction
(I.T.I.) is a method of conceptualizing and implementing a
brain-compatible learning environment for students and
teachers. In a brain-compatible classroom, the curriculum
and instruction fit the way the human brain learns.
Information is more easily learned when it is taught in a

meaningful context and when it is relevant to the learner.

Lessons should connect with the students' lives outside of school and should involve all their senses and skills. Either conceptual or topical themes are appropriate for an integrated curriculum (Gaustad, 1992a). Social studies and science are particularly suited to an integrated study. Helping children formulate research questions, do research, and present what they know provides them with practical applications for their basic skills. The skills of reading, writing, and mathematics are reinforced through inquiry as children work on integrated themes (Politano & Davies, 1994).

Curriculum integration around a theme allows children of all ages and stages to work together and to practice individually. The opportunity to participate in group activities during integrated instruction leads to a cooperative environment in which all students are likely to be successful (Bridge et al., 1993).

Whole Language

Another instructional strategy utilized in a multiage/
nongraded program is whole language. Whole language is a set

they learn literacy (Bridge et al., 1993). Literacy is best taught in the meaningful context of literature and communication and it regards all aspects of language development as interrelated and holds that children can learn to read and write naturally (Gaustad, 1992a). Teaching subskills (i.e., phonics, invented spelling, literacy skills) in context to individual children and small groups as they are needed is encouraged (Bridge et al., 1993). Shared reading, self-selection, process writing, invented spelling, and independent reading are also essential elements of the whole language philosophy.

Hands-On Mathematics

Hands-on mathematics is another instructional strategy utilized by teachers in multiage/nongraded classes. The (NCTM) National Council of Teachers of Mathematics (1991) published guidelines for planning comprehensive mathematics experiences for children. Generally, there are three parts to a lesson: present the concept, provide guided practice, and encourage students to work at activities appropriate for the current level of understanding (Politano & Davies, 1994).

Cooperative Learning

Another instructional strategy utilized in a multiage/nongraded classroom is cooperative learning.

Johnson, Johnson, and Holubec (1994) stated that in a cooperative learning setting, the focus is on students working together to achieve shared learning goals. Cooperative learning involves children in face-to-face interaction and in sharing responsibility for learning. The concept of cooperative learning also involves shared leadership and positive interdependence among group members. Katz, Evangelou and Hartman (1990) found that individual accountability is also crucial in promoting achievement in these groups.

Johnson et al. (1994) reported that a meta-analysis of over 375 experimental studies on achievement indicated that cooperative learning resulted in significantly higher achievement and retention than did competitive and individualistic learning. Johnson et al. also noted that "cooperative experiences promote greater social support than do competitive or individualistic experiences" (p. 22) and "that

cooperative learning has proven to be an essential prerequisite for managing diversity within the classroom" (p. 22).

Slavin (1990) noted that "research on cooperative learning methods has indicated that team rewards and individual accountability are essential for basic skill achievement" (p. 3). In addition, he summarized that in a wide variety of studies, "the overall effects of cooperative learning on student selfesteem, peer support for achievement, internal locus of control, time on-task, liking of class and of classmates, cooperativeness, and other variables are positive and robust" (p. 53).

Peer Tutoring

Peer tutoring is another instructional strategy utilized in a multiage/nongraded program. According to Johnson and Johnson (1994), "considerable research indicates that many students may learn better from their peers than from adults and that many students benefit greatly from teaching other students" (p. 191). Peer tutoring is a teaching process in which the tutor and the tutee are of the same general academic status (Katz et al., 1990). The process involves the active

participation of both members. Because of the level of cognitive closeness, the peer tutor can work within the tutee's zone of proximal development described by educator-turned-psychologist Vygotsky as the difference between an individual's actual developmental level and the potential level of development (Moll, 1994). Learning is facilitated because the distance between peer tutors' and tutees' understandings is smaller than that between children and adults.

Learning Centers

Learning centers are an integral part of the multiage/
nongraded setting. Daniel and Terry (1995) defined a learning
center as "any focal point or area within a classroom that
contains activities and/or materials used to educate, reinforce,
and enrich a skill or learning concept" (p. 18). Learning
centers contain hands-on experimentation and exploration
activities which allow children to construct knowledge
independently through interactions with materials as well as
cooperatively with other children (Daniel & Terry, 1995).
Learning centers contain multi-level materials that will
accommodate a wide range of abilities. Centers promote

independence and a sense of responsibility (Bridge et al., 1993). Students work on activities that are part of their individual growth plan, which has been developed collaboratively with the teacher. Examples of learning centers include: math, art, reading, writing and publishing, science, listening, housekeeping, construction, sand table, drama, and research (Maeda, 1994).

Flexible Grouping

Another instructional strategy utilized in a multiage/
nongraded class requires students to be grouped for
instruction in many ways. The key difference between
grouping in a graded classroom and a nongraded classroom
focuses on the flexibility of the grouping in multiage/
nongraded classes. Groups in a multiage class are formed for
specific and temporary purposes and they change frequently.
Children may be grouped homogeneously for a skill lesson or
an interest session or heterogeneously for content exploration.
Other reasons for grouping students include cooperative group
projects, learning styles, group sharing, individual challenge,
or problem solving (Cushman, 1990; Grant et al., 1995).

Long-term ability grouping or tracking, identified by some educators as a precursor to failure for some young children, is eliminated in a multiage/nongraded setting (Cohen, 1989).

Ability grouping and tracking are forms of grouping children for instruction that are characterized by educators making some rather global judgment about how smart students are, based on IQ and past performance (O'Neil, 1992). According to Martin and Pavan (1976) and contrary to common belief, "Grouping by ability has been found to increase competition among students and decrease motivation" (p. 312).

Multiple Intelligences

Planning instruction that builds upon students' individual strengths is another component of a successful multiage/ nongraded class. Howard Gardner's (1983) theory of multiple intelligences emphasized that each human being has all seven kinds of intelligence: verbal/linguistic, logical/mathematical, visual/spatial, body/kinesthetic, musical/rhythmical, interpersonal, and intrapersonal--in varying proportions.

Traditionally, most of these different ways of learning and knowing have been ignored in classroom practice and on

standardized tests. Rather than measuring every child against one fixed standard such as IQ, each should be measured realistically and individually. This means assessing students, determining their intelligences, planning activities to enhance those intelligences, giving students freedom to move into their discomfort zones, and engaging their full potential (Grant & Johnson, 1995).

Authentic Assessment/Reporting Progress

A critical component of multiage/nongraded school settings is the use of authentic assessment and alternative methods of reporting progress. Traditional standardized tests are skill oriented and are used to sort and classify students rather than give directions for learning (Heald-Taylor, 1989). Just as traditional multiple choice and fill-in-the-blank tests do not always show what students know and are able to do, traditional report cards usually do not convey what students have actually learned. Traditionally, letter grades have been used to give feedback regarding pupil performance and progress. Letter grades are competitive and rank order students, but they do not necessarily measure knowledge.

Letter grades are deceptive and dangerous in their simplicity, particularly at the primary level (Grant & Johnson, 1995).

Although the use of authentic assessment is not as simple as recording grades, the results are far more accurate and productive. Authentic assessment requires a continuous evaluation of each child's learning (Grant & Johnson, 1995). In a multiage/nongraded class the focus is on individual growth, rather than on comparing students' progress. Each child must be regarded as an important individual who has social, emotional, and intellectual needs (Calkins, 1992).

McLean (1990) noted that expectations in a multiage class are set by teachers in terms of starting points, benchmarks, and cumulative growth for individual students. The essence of multiage/nongraded schools is that students start at different places and progress at different rates and there are no expectations by grade level (McLean, 1990).

Demonstrations, projects, essays, discussions, explanations, tests, and quizzes can be used to show evidence of progress (Maeda, 1994). She also noted that portfolios can be used to store evidence of progress and may include

anecdotal records, oral reading assessments, reading response journals, writing samples, and project samples.

Reporting to parents and feedback to students takes on an individualized approach in a multiage/nongraded class.

Reports should be narrative, focus on strengths, outline areas that need work, and set goals (Calkins, 1992). Reporting of student progress in this way encourages collaboration among students, parents, and teachers.

Team Teaching and/or Team Planning

Teachers in a multiage/nongraded program may participate in team teaching or team planning activities. Team teaching is an organizational plan designed to maximize the effectiveness and artistry of each teacher for the benefit of every student.

Team teaching is simply cooperative learning at a professional level.

Martin and Pavan (1976) identified three advantages to team teaching. The first advantage was that children were exposed to the strengths of several teachers. The second advantage was that teachers saw other types of teaching. And finally, the last advantage to team teaching was that it allowed

a more flexible approach to teaching. Two critical attributes are needed for a successful team. First, both members must be willing to share skills and materials and to learn new skills. The second attribute requires both members to be willing to share the adulation extended to "my" teacher (Hunter, 1992). Team members must be able to work toward shared objectives. They must also be able to share students and space. Team teaching also provides built-in opportunities for consultations regarding individual students. Limited research exists on the effects of team teaching on the student. However, Martin and Pavan (1976) found that teachers who work in a team willingly work longer hours.

Implementation Strategies for a Successful Multiage/Nongraded Program

Gaustad (1992a) summarized the elements that are crucial to the implementation of a successful nongraded program as: educating teachers and parents, practical training for teachers, advance study and planning, flexibility in implementation, ownership by staff and parents, providing ongoing planning time, and administrative and community

support. The elements of educating teachers and parents, ownership by staff and parents, and community support are most relevant when making the decision to implement a multiage program. Practical training for teachers and advance study and planning are most relevant as the change to a multiage/nongraded program is being planned. Flexibility in implementation, providing ongoing planning time, and administrative support are most relevant during the actual implementation of a multiage/nongraded program.

Making the Decision to Implement a Multiage/Nongraded Program

A key point when determining whether to implement a multiage program is to involve staff and community members in the decision-making process from the very beginning.

Anderson and Pavan (1993) proposed that one of the first steps should be to take an inventory of the staff's basic beliefs and intuitions. If too many teachers are uncomfortable with the philosophy and practices associated with nongradedness, Anderson and Pavan (1993) noted there was little point in continuing the process.

Visiting successful multiage programs can be the most persuasive and informative staff development activity for teachers to gather information (Kasten & Clarke, 1993). Other activities to gain information about multiage programs include attending conferences and reading current literature (Gaustad, 1994). Parent activities include visiting successful multiage programs; attending meetings with speakers, panel discussions, and videos; and attending conferences (Grant et al., 1995). Written materials that are brief and provide key information are effective in communicating to parents and involving them in the process. Newsletter articles, books, and current articles are also effective methods for disseminating information (Grant et al., 1995). "Putting parents of new students in touch with parents of 'veterans' may be the most powerful means for alleviating their fears" (Grant et al., 1995, p. 12).

According to Grant et al. (1995), the decision to implement a multiage program must be made because of a desire to be student-centered. If the decision is made for financial reasons, to eliminate the need for personnel, to equalize class

sizes, or to be first with the innovation, it will build staff resentment and cause frustration for those who have to teach in the classes, and the multiage program will probably not last.

Planning the Change to a Multiage/Nongraded Program Hunter (1992) cautioned, "We will repeat our failures of the past if we plunge parents and teachers into nongrading without the necessary preparation" (p. 4). Gaustad (1992b) stated, "Changing from graded to nongraded structure requires a major investment of time, energy, and commitment on the part of teachers and administrators" (p.2). A key point stressed by Gaustad (1994) was to allow sufficient time for implementation. She noted that change is gradual and continuous, and occurs only with understanding, acceptance, and support. Gaustad (1994) also found that educators needed time to reflect and find meaning, to integrate old and new understandings, and to learn and practice collaboration. Parents, too, must be involved in the process of planning and decision-making in order for them to feel ownership and support the multiage/nongraded program.

Making the transition to a nongraded school takes time. Gaustad (1992b) stated that it is a systemic change affecting all aspects of the educational system rather than a quick-fix. At least one year should be spent in exploration to build awareness and understanding of the concept of multiage education. A second year should be set aside for intensive planning and staff development. The third year is the time for initial implementation. At least another two years will be required before teachers become comfortable with the change and will feel confident in themselves. An additional five years may be needed to develop a mature and smooth-running operation. The time frame for implementation should remain flexible. The details of implementation should also remain flexible. Adding a few new elements at a time generally works better than attempting to change the entire system at one time (Gaustad, 1992b).

Teacher Selection

It is imperative that those teachers who will be teaching the multiage classes be involved in the decision to implement the program (Gaustad, 1994). As with any change, the implementation of the multiage program will be easier and more successful if those involved in the implementation chose to participate in the program and were also included in the decision-making process.

The role of the teacher in a multiage/nongraded classroom is different from the role of the teacher in a graded classroom. Daniel and Terry (1995) stated, "Teaching in a multiage setting requires a paradigm shift for the teacher. He or she must move from the role of giver or dispenser of knowledge from textbooks to a curriculum developer and a facilitator for children's learning" (p. 12). Teachers in a multiage setting create child-centered environments which recognize that each child brings to school a different background and level of knowledge and experience.

Bingham (1995) presented a set of 12 beliefs that represent a philosophy and a value system that she determined were held not only in the head but in the heart of teachers of multiage classes. These include:

"A belief in child-centered learning. . . . A belief that active, concrete learning experiences are essential for young children. . . . A belief in the whole child. . . . A belief in the importance of community. . . . A belief that many kinds of learning are essential. . . . A belief that

human interaction, including conversation, supports rather than detracts from learning. . . . A belief that continuity in the school setting is of value to young children. . . . A belief that the traditional role of schools in society remains important. . . . A belief that children's progress should be assessed by looking at their own growth rather than by comparing them with others in their age group. . . . A belief that the learner can be trusted. . . . A belief that a wider-than-usual range of ages best supports these convictions." (p. 15-17)

Six preconditions necessary for successful teaching in a multiage class were identified by Rathbone, Bingham, Dorta, McClaskey, and O'Keefe (1993). The first precondition was that the teacher had to believe children can take responsibility for their own learning. The teacher also had to know how to set up a classroom for children who want to learn. The next precondition they described was that resources must be available. Another precondition for successful teaching in a multiage class was that the tasks of classroom management and organization should be second nature to the teacher. The fifth precondition was that the teacher must be a learner as well as a teacher in the classroom environment. The last precondition was that the teacher must have the desire to do it.

Gaustad (1994) described the ideal nongraded teacher. Teachers should know how to design open-ended, divergent learning experiences which are developmentally appropriate. Multiage teachers should possess a varied repertoire of instructional strategies to draw upon in teaching students with different learning styles. They should be able to ascertain each individual student's level of cognitive functioning. Teachers in a nongraded class should also know contentspecific strategies such as whole language and how to integrate subjects into themes and project work. They should know how to design and adapt curriculum and use nontraditional materials such as math manipulatives and learning centers. These teachers should be able to use different grouping patterns for different purposes and design cooperative group tasks. They should be proficient in assessing, evaluating, recording, and communicating student progress using qualitative methods such as portfolios and anecdotal records. Finally, Gaustad (1994) noted that the nongraded teacher should know how to create an environment

in which children enjoy learning and feel secure enough to risk making mistakes.

Being a teacher in a multiage classroom is not an assignment for everyone. The psychological effects of change on each individual must be considered, particularly in the case of implementing a nongraded program. Teaching in an elementary multiage class is a complex task; the teacher has to be truly committed to this kind of philosophical base and be willing to take risks and learn new strategies (Miller, 1994). Gaustad (1994) warned, "It affects everything from basic educational philosophy to details of day-to-day classroom activity, and it often clashes with deeply ingrained expectations" (p. 6). There are differences in teachers' openness to change and their flexibility when faced with new situations. These individual differences must be recognized and respected in adults just as they are in children (Gaustad, 1992b).

Another consideration when selecting personnel is to identify at least two teachers who choose to make the change together and who will teach the same age levels. Planning

together and continual professional collaboration provide emotional support (Banks, 1995; Grant et al., 1995; Kasten & Clarke, 1993; Maeda, 1994).

Inservice Training

Multiage teachers need to understand the theoretical foundations of nongraded primary education. They also need more knowledge about child development, integrated curriculum, and instructional strategies (Gaustad, 1992b).

In addition, teachers need to learn about the process of change itself and be aware of the stages of change. If teachers are not ready for change, the successful implementation of any program will be extremely difficult. Hord (as cited in Gaustad, 1994) stated that, "Change will be successful only if attention is paid to the personal concerns of the individuals involved and the specific contexts in which they function" (p. 9). Several programs designed to facilitate change are currently available. The Concerns Based Adoption Model (CBAM), developed by Hord, Rutherford, Huling-Austin and Hall (1987), is a comprehensive model for change based on the assumption that the single most important factor in any change process is

people who will be most affected by the change. The CBAM model includes several tools to help plan and manage the change process.

The first training for implementation of a multiage program should be offered to the entire staff in order to reduce the anxiety of all stakeholders. Teachers need plenty of time to work out planning and curriculum concerns with each other.

Special area teachers will need time to rethink their presentations of lessons. In some cases, they may need to integrate their lessons with classroom content (Kasten & Clarke, 1993).

Practical training is critically important for success.

Gaustad (1994) stated "The best place to learn new skills is in the context in which they are used--the classroom" (p. 35).

Teachers must be given opportunities to learn about classroom organization; classroom management and discipline; instructional organization and curriculum; instructional delivery and grouping; self-directed learning; and peer tutoring through inservice training, peer coaching, and most ideally,

through visitations to observe established nongraded classrooms (Gaustad, 1992b).

Student Selection

According to Kasten and Clarke (1993), the make-up of the multiage classes should be similar to the general school population in abilities, handicaps, race, gender, social issues, and interests. Kasten and Clarke (1993) suggested that students should be heterogeneously grouped because the multiage/nongraded pattern of organization is appropriate for all students and might be the optimum setting for others. In addition, the number of students in the multiage classes should be equal to the single grade classes of the same age students (Grant et al., 1995).

There is no agreement in the literature identifying which ages or grade levels should be grouped together (Grant et al., 1995). The teacher's personal philosophy and preference should be considered. However, for a teacher implementing a multiage setting for the first time, it is advantageous to group only two grade levels together and to start out with a core of students assigned to that teacher the previous year. It is also

somewhat easier for teachers to add a higher grade level rather than adding a lower grade level. Kasten and Clarke (1993) explained further:

In other words, take a second-grade teacher, let 8-12 of her second graders remain in the class as third graders, and add new second graders to form a composite two-three. . . . It is somewhat easier for many teachers to go up in grade level (such as second grade teacher moving into a two/three) rather than going down in grade level (as in a third grade teacher moving into a two/three). Teachers need time to adjust their expectations, and it seems to be somewhat easier to look forward. (p. 43-44)

Although there is no empirical formula for predicting a successful mix of older and younger students, it seems likely that a disproportionate number can either cause intimidation or a change in expectations (Grant et al., 1995; Katz et al., 1990).

Curriculum

The curriculum for the multiage class should be built on a continuous progress model which supports individual, developmentally appropriate practices. Unless the curriculum has a significant amount of time allocated to informal group work and spontaneous interactive play, the benefits of the age

spread may not be realized (Katz et al., 1990). The curriculum must be oriented toward projects and activities that encourage and allow children to work collaboratively, using the structures of peer tutoring, cooperative learning, and the spontaneous grouping characteristic of young children's play settings.

Teachers must be provided with support and assistance in implementing mixed-age grouping because most current, sequential academic curricula do not support mixed-age grouping. The curriculum needs to identify developmentally appropriate benchmarks which can be reached by most children at the end of a predetermined cycle. These benchmarks should include district and state mandates, as well as research-based, developmentally appropriate benchmarks and teacher-designed benchmarks (Lolli, "n.d.").

Integrated thematic teaching is an ideal approach to social studies and science curriculum in a multiage classroom (Bingham, 1995). Topics can be chosen according to children's interests, community interests, or current events. In cases where district level requirements are required at specific grade

levels, teachers plan to teach them within the long term sequence as a total group and not by grade level.

Parental Involvement and Communication

Parents must be involved in the decision-making process and the process of planning for implementation of a multiage/nongraded program (Gaustad, 1992b; Grant et al., 1995). They should be involved in meetings, visitations, and reading literature (Grant et al., 1995). Taking the time to involve parents and communicate with them often is effective for gaining support for the multiage program.

Gaustad (1992b) stated that parents must also be given the opportunity to allow their children to participate in the multiage program. Kasten and Clarke (1993) supported giving parents the choice of placing their child in a multiage/nongraded setting or in a single-grade class.

Leadership Support

The literature is replete with research that describes the importance of leadership support for innovations. In a study completed by Miller (1994), the results of the interview

analysis of elementary teachers strongly suggested that leadership played a significant role in the success achieved by each school in implementing its multiage program. Effective school leaders were characterized as being facilitative and transformational. School-level leadership developed relationships and communications that were characterized by openness, trust, and mutual respect which encouraged risktaking. In Miller's (1994) study, effective school leaders accepted and valued the developmental differences in staff members and recognized that there is no single right model for a multiage class. The effective school leaders were patient, expressed the belief that all teachers could implement the desired changes, and supported their teachers by finding resources such as time and money (Miller, 1994).

Problems and Issues Encountered During Implementation

Miller (1994) identified the primary problem in

implementing a multiage program as developing support for
the change effort. Recommendations to solve the problem
included educating all stakeholders; striving to learn and
improve as a group so that all staff members would develop a

shared understanding of the change effort; planning well ahead of implementation and focusing on slow, incremental changes; building trust through communication among staff members by discussing beliefs and reasons for multiage; sharing successes and challenges; being persistent; and expecting stress and conflict which are natural to change.

Providing ongoing staff development, financing materials, and the need for more collaborative planning time were also listed by Miller (1994) as implementation problems. Assessing program changes with traditional methods such as standardized achievement tests caused great concern during implementation. Another concern listed by Miller (1994) was difficulty letting go of traditional grade-level thinking and instruction. Sustaining the multiage change effort through such activities as monitoring implementation, keeping abreast of new research, keeping the same staff members in the multiage program, and ongoing refinement also caused concern (Miller, 1994).

Summary

This chapter began with a brief review of the history of graded and nongraded education. Although early instruction was highly responsive to individual needs, a graded organization was introduced in order to efficiently handle the large numbers of students who were guaranteed a free public education. It soon became apparent that the premise upon which graded education was developed—that students of the same chronological age are basically at the same level of development, can be taught in the same way, and will progress at the same rate—was erroneous and the practice of retention in grade level was introduced for those students who did not measure up.

Both child development theory and learning theory describe practices and policies which are good for children and should be utilized in early childhood education programs. The multiage/nongraded organization was identified as supporting and enhancing these practices and policies. Pratt (1986) stated, "the mass of evidence indicates that, for students, the

multiage environment is socially and psychologically healthy" (p. 114).

The critical attributes of a high quality early childhood program described, but not always labeled, by Bredekamp (1987) included: developmentally appropriate practices; continuous progress; varied instructional strategies including hands-on/active learning, integrated curriculum, whole language, hands-on mathematics, cooperative learning, peer tutoring, learning centers, flexible grouping, and application of multiple intelligence theory; authentic assessment and reporting progress; and team teaching and planning.

There are advantages and disadvantages of the multiage/
nongraded program for both students and teachers.

Comparisons of graded and nongraded programs indicated
that, in general, multiage programs are as effective as or better
than graded programs in terms of students' achievement.

Evidence also indicated that multiage programs far surpassed
graded programs in terms of attitudes and self-concepts of
students. Teacher concerns included sufficient time for
planning curriculum and learning new teaching strategies.

Strategies for implementation of a successful multiage/
nongraded program are divided into three parts: decisionmaking, planning for implementation, and actual
implementation. One model for managing change, the
Concerns-Based Adoption Model (CBAM), was developed by
Hord et al. (1987). Gaustad (1994) stated, "In nongraded
education, the focus is on the needs of the learner--the child.
In CBAM, the focus of the change process is also the learner,
in this case the teacher. It seems appropriate that a
'developmentally appropriate' process is necessary for the
success of both" (p. 10).

The review of related literature and research provided in Chapter II form the basis for this dissertation on multiage/ nongraded education. Chapter III contains a description of the methods and procedures used during this research study.

CHAPTER III

METHODOLOGY

Introduction

A multiage/nongraded structure is one way to group students for success in school. In the review of related literature, Gaustad (1992a) noted that the resurgence of nongradedness during the 1960s failed due to an inadequate understanding of the concept; a lack of training for teachers in developmental theories and practice; a lack of support from the rest of the educational system, from parents, and from the community; and a move back to basics. This ethnographic research study was undertaken to help determine what challenges were being faced by educators who were currently implementing a primary multiage/nongraded program. Findings from the study could help colleagues planning to implement a multiage/nongraded program in the future.

This chapter will begin with a general description of the methodology of qualitative research. A rationale for using

focus group interviews to gather data for this particular study will also be presented. A description of the study and the methodology used will follow. Explanations of the population, survey instruments, data collecting procedures, and the processes for analyzing data will also be discussed.

Qualitative Research Methods

Qualitative research requires the observation of natural situations or settings and an attempt to interpret phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 1994; Lofland & Lofland, 1995). Qualitative research emphasizes processes and meanings rather than measurement and analysis of relationships between variables as in a quantitative study (Denzin & Lincoln, 1994).

Qualitative research has many labels. The process may be called field study, ethnography, case study, or naturalistic inquiry (Bogdan & Biklen, 1992). Regardless of the labels used, the studies are alike in that they share certain characteristics. Bogdan and Biklen (1992) also stated that one characteristic of a qualitative study is that the data collected are descriptive of people, places, and conversations and cannot

be easily handled by statistical procedures. A second characteristic is that the research questions in a naturalistic study are written so that a complex investigation of the topic can be made. Another characteristic is that field study researchers do not approach their research with specific variables or hypotheses to test. Finally, Bogdan and Biklen (1992) noted that in a qualitative study the researcher collects data in the settings where subjects spend their time.

One of the most popular techniques of qualitative research is to conduct interviews. The focus group is one example of an interview technique. In a focus group the interviewer asks group members very specific questions about a topic after considerable research has already been completed by the interviewer (Denzin & Lincoln, 1994). According to Krueger (1994), the focus group discussion is particularly effective in providing information about why people think or feel the way they do rather than how they feel (Krueger, 1994). Focus groups also allow the moderator to probe for more relevant information. For these reasons, the focus group was chosen as the data collection method for this study.

Statement of the Problem

This study sought to identify the (a) critical attributes of a successful multiage/nongraded program, (b) strategies necessary for successful implementation of the program, (c) inservice training needed by teachers to implement a successful program, (d) obstacles encountered during implementation, (e) advantages and disadvantages of a multiage/nongraded program for students, and (f) advantages and disadvantages of a multiage/nongraded program for teachers.

Population

The population for this study was elementary public school teachers of primary multiage classes in a large central Florida school district. These teachers participated in focus group interviews and completed a demographic questionnaire. An electronic bulletin board request to identify the teachers of multiage/nongraded classes in each school and the grade configuration for each class was sent out to all public elementary schools in the school district in September 1995. Classes were to be identified as multiage by each administrator

back to the researcher by the building administrators. Only teachers in regular basic multiage classes in the school system were considered for this study. Teachers in special areas such as music, physical education, media, or exceptional education were not included in this study.

Instrumentation

A comprehensive review of literature related to multiage/
nongraded programs included viewing videotapes; reading
books and articles written by practitioners, theorists, and
researchers; talking with other doctoral students who were
currently writing dissertations on the topic; and attending
conferences and seminars. Based on the review of related
literature, this researcher developed a list of topics to be
covered in the focus group interviews. The list of topics was
reviewed by this researcher to ensure that the topics related to
the concerns addressed in the literature and also focused on
the research questions for the study. Categories, based on the
research questions, were established in which to group the
topics. After the categories were finalized, the researcher

generated a list of questions to be used during focus group interviews. A focus group Interview Guide (see Appendix A) with 7 open-ended questions emerged. The focus group Interview Guide contained probes for each question so that this interviewer could obtain specific information on each topic.

Krueger (1994) identified five types of questions to use with a focus group. Question 1 of the focus group Interview Guide served as an introductory question intended to give participants an opportunity to reflect on past experiences with multiage grouping. Questions 2, 3, 4, and 5 of the focus group Interview Guide served as the key questions for each focus group. Questions 6 and 7, the ending questions, were designed to allow participants to reflect on previous comments and to bring closure to the discussion. An opening question as described by Krueger (1994) was not used in the focus group Interview Guide because the participants were already familiar with each other. A transition question as identified by Krueger (1994) was also not needed.

In addition to the focus group Interview Guide, a brief questionnaire (Appendix B), completed in writing by each focus group participant, was developed to obtain demographic information. To save time, all participants were asked to complete the questionnaire at the end of each focus group interview session.

Focus Group Interviews

In December 1995, principals were notified by letter
(Appendix C) that the teachers of multiage classes would be
contacted by this researcher in order to schedule small group
interviews. The purpose of each small focus group was to gain
information regarding the implementation of multiage classes.
Principals were given the opportunity to object if they did not
want their teachers to participate. Two principals sent letters
that indicated their support of the research and gave
permission for their teachers to be interviewed. One principal
called to verify that only teachers who volunteered to be
included would be expected to participate. The remainder of
the principals did not respond.

All teachers of multiage classes were notified by letter (Appendix D) in January 1996 that they would be contacted in order to schedule a convenient focus group interview time at each school. In those schools where there was more than one multiage teacher, the assistant principal was contacted by the researcher to coordinate the scheduling of focus group session(s) at each school. The assistant principals arranged to have other school personnel teach the participants' classes if additional time was needed to complete the interviews. In schools where there was only one multiage teacher, this researcher contacted the individual teachers to arrange a convenient individual interview date and time.

Krueger (1994) suggested that focus groups should be composed of between 6 to 10 people in order to give everyone the opportunity to share. He also stated that participants should be unfamiliar with each other. However, constraints such as the lack of common times to meet other than before and after school or during teachers' planning times made it impossible to ensure that persons were unfamiliar with each other. Therefore, focus groups for this study were arranged

according to worksite and for the convenience of participants.

The number of participants in each group was determined by the number who were available at the scheduled time.

From January through April 1996, a series of focus group interviews was held. Fifteen of the focus group interview sessions were audiotaped and field notes were made during all interviews. Two telephone interviews and five face-to-face interviews were made in those instances where there was just one multiage teacher at a school site. Written field notes were recorded during each individual interview. One of the individual interviews was also audiotaped.

Table 1 contains a summary of the focus group interview sessions with multiage teachers. A total of 58 teachers in 18 elementary schools in a large central Florida public school district participated in the focus group interviews. Fifteen focus group interview sessions and seven individual interview sessions were conducted to gather data. Focus group interviews were held before school, during planning times, or after school.

Table 1

Focus Group Interviews of Multiage Teachers (N=58)

Focus Group Identification	Number of Participants	When Held
Α	9	After School
В	4	Planning Time
С	6	After School
D	4	Planning Time
E	4	Planning Time
F	3	Planning Time
G	2	After School
Н	2	Planning Time
I	2	Planning Time
J	3	Before School
K	2	Planning Time
L	2	Planning Time
M	4	After School
N	2	Before School
О	2	Planning Time
Individual	7	Various Times

The interviews began with a brief statement by this researcher welcoming the participants and giving an explanation regarding the purpose of the interview, the procedures to be followed, and an explanation of how information would be reported. Participants were encouraged to honestly share their opinions and experiences regardless of whether they agreed or disagreed with others in the group. It was noted that an awareness of opposing opinions and experiences could provide valuable information to those planning to implement a multiage program. The participants were asked if they objected to having the session audiotaped for this researcher's reference. All groups supported the tape recordings. The participants were assured that all information would be confidential. Field notes of this researcher for each of the focus group sessions were also recorded on the Interview Guide.

This researcher ended each session with an expression of thanks for the participants' time and involvement. This researcher also assured the participants that they would have access to a copy of the results of the study.

Role of the Researcher

The role of this researcher in this study was to create an open environment that nurtured different perceptions and points of view, without pressuring participants to vote, plan, or reach consensus. This process followed research procedures advocated by Krueger (1994). The emphasis was on the individual participant, and the researcher was not in a position of power or influence but encouraged both positive and negative comments. In the permissive environment of the group interviews, this researcher brought focus to self-disclosures obtained through open-ended questions.

This researcher served several functions in each focus group. Those functions, identified by Krueger (1994), were moderating, listening, observing, and analyzing. This researcher exhibited a friendly manner and a sense of humor, in addition to communicating clearly. This researcher was comfortable and familiar with group processes and exercised a mild, unobtrusive control over each group.

Analysis of Data

The analysis of data for this study relied primarily on this researcher's field notes made during each focus group interview. In addition, most of the focus group interviews were audiotaped and the recordings were used to verify specific quotes as suggested by Krueger (1994). The tape recordings were also used to clarify this researcher's field notes.

The field notes and audiotapes were first analyzed as raw data. Responses for each of the seven questions on the focus group Interview Guide (Appendix A) from all focus groups were categorized and recorded. This researcher began by grouping together all focus group interview field notes for each question. Categories of responses were established based on the probes under each question of the focus group Interview Guide. For instance, one category was instructional components. Subcategories under this heading included: continuous progress, developmentally appropriate activities, authentic assessment, whole language, integrated curriculum cooperative grouping, ability grouping, flexible grouping, manipulativehands/on approach, and multiple intelligence strategies.

After analyzing the field notes, which contained general concepts and thoughts expressed by the participants, this researcher reviewed each audiotaped focus group session and noted significant quotes to be grouped with the field notes.

The purpose of the accumulated raw data analysis was to provide exact statements of focus group participants as they responded to the topics.

This researcher used this raw data to develop a descriptive summary with illustrative quotes. Quotes were selected to provide insights of representative, common, or usual ways in which participants responded. The purpose of the descriptive summary was to provide a simple summary of the data (Krueger, 1994). Building on the descriptive summary, this researcher concluded with an interpretive analysis of what the data meant based on trends and patterns that occurred across the focus groups (Krueger, 1994). The purpose of the interpretive analysis was to provide an in-depth understanding of the data.

While analyzing data, the researcher took into consideration the choice of words and the tones used by each

participant; the context of the situation; the nonverbal clues; the consistency, frequency, specificity, and intensity of responses; and the big ideas offered by the participants (Krueger, 1994).

Summary

This chapter described the research methods utilized in this study. A total of 58 teachers of primary multiage classes in 18 elementary schools in a large central Florida school district was involved in this ethnographic study. The purpose of the study was to gather data regarding the essential elements of a successful multiage program and the factors that contributed to the implementation of a successful multiage program. In addition, this study was designed to identify appropriate staff development activities for successful implementation, obstacles to avoid during implementation, and the advantages and disadvantages of multiage/nongraded programs for students and teachers.

All participants in the focus group interviews volunteered to participate in the research study. The procedure for

developing the focus group Interview Guide was described and a systematic approach to data analysis was explained.

Chapter IV contains a brief history of the growth of multiage programs in the school district as well as a profile of a multiage teacher in the district. An analysis of the focus group interview data by research question is also presented.

CHAPTER IV DATA ANALYSIS

Introduction

This study sought to describe the critical attributes of a successful primary multiage/nongraded program and the strategies that contribute to its successful implementation. In addition, this study sought to describe the problems encountered during implementation of a primary multiage/nongraded program, the staff development activities necessary for successful implementation, and the advantages and disadvantages of a primary multiage/nongraded program for students and teachers. The context was a large central Florida public school district of approximately 7,100 employees and 65,000 students.

History of Multiage/Nongraded Programs in School District

In this school district an interest in implementing multiage/nongraded programs became apparent in the early

1990s. A district-level administrator sponsored the attendance of several school-level administrators and teachers to the Phi Delta Kappa Gabbard Institute on nongraded schools. This institute was led by Robert Anderson and Barbara Nelson Pavan, who were well-known proponents of nongraded education.

During the 1995-96 school year, 18 schools in the district were implementing a primary multiage/nongraded program. In this school district the decision to implement a multiage program was made at the school level and the district's responsibility was to support the schools' implementation efforts. District support consisted of providing financial assistance to several teachers and administrators who attended conferences with a focus on the multiage concept. In addition, a district Multiage Support Group met informally during the 1992-93 school year. During the 1993-94 school year, the Multiage Support Group was officially formed. Members of the support group met approximately 6 times during that year and 6 times during the 1994-95 school year. This support group continued to meet during the 1995-96 school year as part of a general support group for all new

educational initiatives in the school district. Administrators, teachers, and district level personnel were invited to attend the monthly meetings, which were held at the end of the school day. The purpose of these meetings was for participants to share their successes and to seek solutions to the challenges associated with implementing new instructional programs.

District support also included the provision of gummed labels to affix to students' cumulative records to identify those students who had participated in a multiage program. In addition, a district-level task force aligned the school district's curriculum requirements into a skills continuum. Although the continuum was arranged by grade level, the natural progression of skills could be seen and multiage teachers could adapt the continuum to meet their needs.

A Composite of a Multiage Teacher in School District

All focus group interview participants in this study were asked to complete a brief questionnaire (Appendix B) at the end of the interview session in which they participated. The questionnaire focused on demographic information related to each participant's age, sex, highest level of education, total

years of teaching experience, number of years of teaching experience in a multiage setting, and areas of teaching certification. In addition, the questionnaire contained questions regarding the make-up of the multiage classes in which the participants were currently teaching. The final question encouraged each participant to take a position regarding his/her preference for teaching in a multiage or single-grade classroom.

The first question on the demographic questionnaire required the respondents to indicate their age at the time of the survey. The next question required the respondents to indicate their sex. The ages of the teachers of multiage programs who participated in the study and their sex are reported in Table 2. A comparison shows that more of the primary multiage teachers in this study (24 or 41%) were in the category of "less than 30 years of age" than any other category. The 16 participants in the category "40-49 years of age" represented 28% of the total group. When respondents were asked to identify their sex, the results indicated that 53

of the multiage teachers (91%) were female and 5 (9%) were male.

Table 2

Age and Sex of Focus Group Participants (N=58)

Age (In Years)	Number of Male Participants	Number of Female Participants	Percentage of Participants
Below 30	2	22	41%
30-39	1	11	21%
40-49	2	14	28%
50-59	0	6	10%
60-69	0	0	0%
Over 69	0	0	0%
Totals	5	53	100%

Table 3 contains information regarding the highest educational degree attained by the participants in the study. The data revealed that 38 of the participants (66%) had a bachelors degree. Twenty of the participants (34%) held a masters degree. None of the focus group interview participants had received a specialist or doctoral degree.

Table 3

Educational Degree Level of Focus Group
Participants (N=58)

Degree	Number of Participants	Percentage of Participants
Bachelors	38	66%
Masters	20	34%
Specialist	0	0%
Doctoral	0	0%

The total years of teaching experience of each participant in the study are reported in Table 4. An analysis of the data indicated that 22 of the teachers of multiage classes (38%) had from 1 to 5 years of teaching experience. Nineteen of the respondents (33%) reported they had taught from 6 to 10 years. Six of the participants (10%) revealed they had 11 to 15 years of teaching experience. Five of the participants (9%) noted they had from 16 to 20 years teaching experience. Three of the participants (5%) recorded they had from 21 to 25 years of teaching experience. Three additional participants (5%) reported they had 26 to 30 years of teaching experience. No

participants had 31 to 35 years of teaching experience. Only 1 of the participants (2%) indicated that she had more than 35 years of teaching experience.

Table 4

Total Years of Teaching Experience of Focus Group Participants (N=58)

Total Number	Number of	Percentage of
of Years	Participants	Participants
1-5	22	38%
6-10	19	33%
11-15	6	10%
16-20	5	9%
21-25	3	5%
26-30	3	5%
31-35	0	0%
Over 35	1	2%

The number of years of teaching experience in multiage classrooms as the teachers reported are displayed in Table 5.

The data showed that 20 of the participants (34%) reported

they had two years experience in a multiage setting. A total of 16 of the participants (28%) indicated they had only one year of teaching experience in a multiage classroom setting.

Another 16 of the respondents (28%) also indicated they had three years experience in a multiage classroom. The data also showed that 4 of the participants (7%) reported they had four years experience teaching in a multiage classroom. Only 2 of the respondents (3%) indicated they had five years experience teaching in a multiage classroom setting.

Table 5

Number of Years of Teaching Experience in a Multiage Setting of Focus Group Participants (N=58)

Number of years in a	Number of	Percentage of Participants
Multiage Setting	Participants	Farticipants
1	16	28%
2	20	34%
3	16	28%
4	4	7%
5	2	3%

Table 6 contains the data indicating the areas in which multiage teachers were certified. Twenty-six of the teachers (45%) were certified in elementary education. Twenty-five of the teachers (43%) were certified in both early childhood education and elementary education. Six of the participants in this study (10%) were certified in early childhood education. One participant (2%) was certified only in the area of middle grades.

The analysis of the data indicated that 57 of the multiage teachers in this study (98%) were certified in elementary education, early childhood education (primary, kindergarten, nursery, preschool), or both. It was notable that there were almost as many teachers who were certified in both areas as there were teachers certified in elementary education.

Table 6

Areas of Teaching Certification of Focus Group Participants (N=58)

Area(s) of Certification	Number of Participants	Percentage Of Participants
Early Childhood	6	10%
Elementary Ed.	26	45%
Both	25	43%
Neither	1	2%

The traditional grade level designations that were contained in the multiage classrooms of the participants are displayed in Table 7. Fifty-one of the multiage teachers in the district (88%) had two grade levels in one classroom. Twenty-two of the teachers (38%) indicated they had kindergarten and first grade students in their classes. Twenty-one of the teachers in this study (36%) responded they had second and third graders in their classes. Six of the teachers (10%) noted they had first and second graders in one class. One teacher (2%) responded that kindergarten and transitional kindergarten students were

assigned to her classroom. One other teacher (2%) indicated that third and fourth graders were in her multiage class.

Six of the teachers (11%) indicated they had three grade levels in their classes. Five of the teachers (9%) responded their classes were composed of first, second, and third graders. One teacher (2%) responded that kindergarten, first, and second graders were in her classroom.

Only one teacher (2%) indicated that her class was composed of four grade levels. There were kindergarteners, first, second, and third graders in her class.

Table 7

Traditional Grade Levels Taught by Focus Group Participants (N=58)

Traditional Grade Levels	Number of Participants	Percentage of Participants
K, TK	1	2%
K, 1	22	38%
K, 1, 2	1	2%
K, 1, 2, 3	1	2%
1, 2	6	10%
1, 2, 3	5	9%
2, 3	21	36%
3, 4	1	2%

The final item on the questionnaire allowed participants to choose between teaching in a multiage classroom or a graded classroom. Respondents were asked to indicate a choice.

Table 8 shows a correlation of the responses from the interview participants and their field of certification.

Table 8

A Comparison of the Areas of Teaching Certification and the Choice to Continue in a Multiage Setting (N=58)

Area(s)	Number (Percentage) of Participants Answering	Number (Percentage) of Participants Answering	Number (Percentage) of Participants Who Were
Certification	Yes	No	Undecided
Early Childhood	5 (9%)	1 (2%)	0 (0%)
Elementary Education	13 (22%)	9 (16%)	4 (7%)
Both	19 (33%)	4 (7%)	2 (3%)
Neither	1 (2%)	0 (0%)	0 (0%)
Totals	38 (66%)	14 (24%)	6 (10%)

Nineteen of the participants (33%) who were certified in both early childhood education and elementary education indicated they would seek another multiage position if their position was no longer available. An additional 13 participants (22%) who were certified in elementary education also indicated they would seek another multiage position. Five of the participants (9%) who were certified in early childhood

education and one participant (2%) who was certified in neither area responded they would continue in a multiage position if their position was no longer available.

The largest number (9) of participants (16%) who chose not to seek another multiage position if their position was no longer available were certified in elementary education. Four participants, certified in both elementary and early childhood education and one participant (2%) who was certified in early childhood noted they would not seek another multiage teaching assignment if their multiage program was discontinued.

Four of the participants (7%) who were certified in elementary education and two of the participants (3%) who were certified in both elementary education and early childhood education were undecided regarding their preference of teaching in a multiage classroom or a graded classroom.

The totals show that 38 of the participants (66%) preferred teaching in a multiage class as opposed to a single-grade class. Several participants "enjoyed working with the students for more than one year" and thought "having the children for

two years is wonderful for assessment and relationship building."

A participant in focus group J wrote, "It is developmentally appropriate. All children benefit from this program. I love it!" Another participant in focus group M recorded, "The multiage program is excellent for children. They are successful at their own rate. The children 'blossom' in the program." In focus group C, one teacher who preferred the multiage concept wrote, "I am teaching and meeting the needs of the individual child." In focus group G, a participant wrote that the multiage program was preferred over the traditional "because of nonthreatening child development activity." In focus group B, one participant wrote that the multiage program was preferred due to its "continuity." Another participant in focus group B wrote, "We are family; the students seem to make good academic progress; the teachers plan everything together; the students have good self-concepts; continuity." One participant in focus group A indicated a preference for the multiage program "because I could not be happy teaching in a 'testdriven', sit-down, worksheet environment! I love ITI

[integrated thematic instruction] and cooperative grouping, adhoc grouping, etc."

Fourteen of the participants (25%) indicated they preferred a traditional classroom setting. Reasons for their choice included lack of adequate planning time and the restrictions they perceived were being placed on them by the school district. One respondent in focus group C wrote that "lack of time to plan and successfully implement the program" was the reason that a graded concept was preferred. A participant in focus group O wrote, "I feel for me this [single graded] is a better way because of restrictions put on us by the county." In focus group D, a participant wrote that a graded concept was preferred "because our county is reverting to a skill-oriented system." After a focus group discussion regarding the large amount of time needed by teachers on a daily basis to adequately plan for multiage teaching, a teacher in focus group F wrote, "I am choosing to teach a 'graded' class next year to have time to develop curriculum for [the] brain compatible education model we are currently working on. I plan to teach my 'graded' class the same way I taught my

multiage class." A teacher in focus group E indicated that she preferred a graded concept "because I can have a multiage philosophy in a straight grade classroom with less work."

Six participants (10%) were undecided when asked to indicate their preference for teaching in a multiage or graded classroom. Two participants in focus group C were undecided and one teacher wrote, "I see many benefits to the multiage program; however, it is very time consuming and planning time that is allotted now is not adequate." The other teacher wrote, "I do like the multiage concept. I have a family now and I want to devote my extra time to them." One participant in focus group O echoed the comments of several of the focus group participants, "I feel that this [multiage] is a worthwhile concept; but with all the restrictions the county puts on us, it is not advantageous to the teacher having to cover two curriculums."

When analyzing the data from another perspective, the results indicated that the 24 participants who were certified in early childhood education or who were certified in early childhood and elementary education were more likely to seek a

multiage teaching position than the 13 who were certified in elementary education.

In summary, a typical multiage teacher in this large central Florida public school district tended to be a female who was below 30 years of age. This teacher had a bachelors degree and was certified in elementary education, early childhood education, or both elementary and early childhood education. This multiage teacher had between 1 and 5 total years of teaching experience with 2 years teaching experience in a multiage setting. She taught either a K,1 or 2,3 multiage class and would seek another multiage teaching position if hers was discontinued.

Results

The summary of results in regard to the six research questions for the study follows.

Research Question 1

What were the critical attributes of a successful primary multiage/nongraded program?

One of the one most common concepts expressed during the focus group interviews was that, although there were many

of the same critical attributes in all multiage classes (i.e., integrated thematic teaching, whole language, hands-on mathematics, and learning centers), there was not one preferred method to organize a multiage class or one preferred style in which to function as a multiage teacher. Participants noted that multiage teachers had to identify what worked best for each of them. After attending professional conferences, visiting other schools, and reading literature, one participant in focus group H described it this way, "Everybody's idea of multiage was different. And, so we came back and what I said was, 'Well, I like that about that one and that about that one, but I couldn't stand to do that and I wouldn't really care to do that'. What I think we decided is that each school is so unique and different that each multiage has to be unique and different. . . . [There] might be common threads throughout it but the makeup is utterly different for each [multiage class]." One participant in focus group L remarked, "They [teammates] went to one workshop; we went to another and then we kind of sat down and said, 'This is what we think would work for us'.

. . . and kind of almost made our own philosophy. . . . took a little bit of both. . . . what we thought might work."

Team teaching and/or team planning, or cooperative learning at the professional level, were noted as being one of the most necessary attributes of a successful multiage program. A teacher in focus group D stated, "That's number 1. Find yourself one other person you're compatible with." Several participants agreed with a teacher in focus group C who commented that she was involved in the multiage program because "the people I wanted to work with were doing it." Participants also indicated that they felt comfortable as part of a team and that teammates provided support in a risk-free environment during challenging times. For instance, a participant in focus group H recalled an occasion when a change in classroom strategies was needed but she was reluctant to try. Her teammate encouraged her by saying, "C'mon, c'mon. Just try it. We just have 3 days. What can we lose for 3 days?" Another participant in focus group I commented on the sharing that happens with team teaching, "We get different ideas just from the 4 of us; just after school

talking and someone will have tried something in their room." One participant in focus group L responded, "Our strongest thing is having each other as a teammate." A participant in focus group H succinctly reflected, "The support [from the teammate] needs to be great." During focus group F, a participant said, "I think we, in our pod, work well together. We were able to bounce things off each other--cry on each others' shoulders and just help." A study participant in focus group E felt strongly enough about the team teaching comment to state, "If I was not able to team teach I would discontinue with multiage." One participant from focus group I added that, although working with a teammate is critical, "working with somebody when you've never had to agree with somebody before" can be a problem.

Developmental appropriateness, which means that activities for students are age and individual appropriate, was also mentioned as a key concept for multiage settings. One participant in focus group J shared, "I got into it [multiage] because I was having a real complex teaching first grade and my classrooms have always been very developmental and I've

always run into the curriculum that is not developmental and I knew there had to be a better way for these little first graders that were developmentally young and also meet the academic needs." A member of focus group P concurred, "That's first and foremost for us because if it's not developmentally appropriate, they're not going to learn it."

Using a Whole Language philosophy, which emphasizes a literature-based curriculum taught in a natural and interrelated manner, seemed to be one of the most popular of the teaching strategies brought up during the focus group interviews. One participant felt, "I think that's very important for a multiage teacher to be [a whole language teacher]." A participant in focus group P expressed that it's "no way to teach out of the same text," [you need a] "good literature-based program." Participants noted that shared reading, guided reading, and process writing all needed to be part of the language arts instruction.

Thematic teaching, in which the curriculum was organized by a common theme, topic, problem, or question, was a second, but almost as strong, teaching strategy often mentioned by participants. Teachers appeared comfortable in developing thematic units and integrating science and social studies with language arts. In fact, discussions regarding the use of thematic teaching were spontaneous. In almost every focus group, thematic teaching was mentioned as the most effective means of teaching in a multiage class. When specifically asked about integrated thematic teaching, one participant in focus group E nonchalantly responded, "We were doing thematic teaching before." However, a teacher in focus group P noted, "We are doing it [integrated thematic teaching] but not as much as I'd like because [of] the time factor."

Mathematics seemed to be the hardest subject area to organize in a multiage class. Many of the participants noted that they reverted to grade level instruction in mathematics due to grade-level expectations at the county level and on the SAT (Stanford Achievement Test). One participant in focus group P commented, "I'm a big proponent of Marilyn Burns and her ways of teaching math--manipulatives based. I love to do math and literature together, just provide a creative

environment for kids to learn in, but it's difficult now with SAT."

Cooperative learning, where the focus is on working together to achieve shared goals, was also listed as a critical teaching strategy in a successful multiage program. Teachers indicated that without cooperative learning groups it would be difficult to meet the diverse needs of all students. One participant in focus group M reported that she believed "children learn better from each other--modeling from others." A participant in focus group E reported, "We do a lot of cooperative groups, but you have to and we do it all the time and the kids get so good at it that we don't even think of it as cooperative groups because with the multiage you have to."

Peer tutoring and pairing students are teaching strategies that encourage two students who are at the same general academic level to work with each other in a learning situation. A respondent in focus group E mentioned, "We'll pair our kids. . . . everybody's getting what they need. They're learning as they teach." A participant in focus group E elaborated, "As a kindergarten teacher I couldn't do all those things before,

because they didn't have a good model." A respondent in focus group F felt, "there is so much growth from peer teaching."

A continuous progress and/or individualized instruction component whereby students move from easier to more difficult materials at their own rates and at their own levels was another critical attribute of a successful multiage program mentioned by participants during the focus group interviews. A participant in focus group K noted, multiage "allows the children to grow and develop at their own rate." However, several participants indicated that, with the current grade level requirements for promotion, retention, and administrative placement, it was impossible to implement a true continuous progress component. One participant in focus group U volunteered, "I'm not sure that there's a clear definition or understanding of continuous progress. . . by teachers and administrators. If there was, we could unite more." A participant in focus group P noted, "You have to do that [continuous progress]." A participant in focus group K replied, "Even though we see a tremendous growth, it's still not what it's gonna have to be. . . to be successful in a graded

classroom." A multiage teacher in focus group U shared that her dream was to have a one-room schoolhouse and "be able to keep the kids and have them really on a true continuum."

Authentic assessment and portfolio assessment were also noted as critical attributes of a multiage program that allowed for continuous evaluation of individual progress using direct examination of student performance in real-life, relevant situations. However, the focus group participants in this study noted that they continued to use the school district report card. A participant in focus group I commented, it's "difficult when we're looking at judging a child from within, on his own, and then we have to turn around and judge them against the whole group." One participant in focus group H reflected that she had to ask herself, "Who are we basing this child against. . . themselves or that imaginary, wonderful first grader?" when completing the report card. However, most of the participants also communicated in other ways. A member of focus group P noted that, in addition to report cards, "we also use the telephone and send notes, or individual progress plans, depending on the students." Most of the participants

indicated that they "keep portfolios" and use running records to record student progress in authentic ways and to report to parents regarding the students' growth.

Flexible grouping of students throughout the day according to skill needs, interests, and/or learning styles was noted as an effective way to work with students in a multiage classroom. A member of focus group C described grouping for mathematics, "It varies. Sometimes kids are better in one aspect of math than another, so we flip flop them back and forth." A participant in focus group F shared the feeling that "At first, I thought it was wrong to group by ability." Another participant in focus group C stated, "My kids can be grouped in 3 or 4 different ways in a day--definitely there is a time for ability grouping."

Multiple intelligence strategies were identified as a critical component to a successful multiage program by participants in several focus groups. An interviewee in focus group J offered, "I think that's the real key. . . the multiple intelligences and teaching around the 4mat wheel. . . . You almost have to teach them and that way you're meeting all the needs." Other

participants suggested that although they have "not looked at it formally," they are doing it naturally.

A participant in focus group H narrowed the critical attributes of a multiage class to two: "integrated thematic teaching and team teaching." A participant in focus group F concurred and summarized the critical attributes of a multiage program in this way, "You know, if we all, in every classroom, internalized Jim Grant's philosophy [which focuses on developmentally appropriate practices and continuous progress] along with the integrated thematic instruction method and we all did that, we wouldn't have to call it multiage, ungraded. . .it would just be the way that children should learn."

Research Question 2

What strategies were necessary for the successful implementation of a primary multiage/nongraded program?

In the review of related literature, it was established that those teachers who would implement the multiage program should be part of the decision-making process. In this study it was noted that almost all of the focus group interview

participants stated that the original decision to implement the multiage program at their school was made by the teachers for the teachers. Some of the participants stated that their principals may have initiated a discussion regarding the implementation, but it was the teachers and teacher/parent groups who discussed, researched, and made the final decision. A participant in focus group C offered, "The principal brought it up and it grew from there." In other cases, the teacher may have had the desire to implement a multiage program and presented the concept to the principal. One participant in focus group L added that she and her teammate "made up a package for the administrators and gave the pros and cons." A member of focus group F stated, "I mentioned it one day and then, the next thing I know, I have a stack of books to read."

Many of the participants in this study were not available to be involved in the original decision to implement the multiage program at their schools. Therefore, an analysis of the reasons for participants in this study becoming involved in the implementation of a multiage program was made. The analysis

revealed that there were various reasons ranging from belief in the multiage concept to job security. Several respondents noted that they liked the philosophy of the multiage program and therefore wished to implement it. A participant in focus group F summarized, "I don't think you can talk anybody into it. They either feel it here [in the heart] or they don't." Another participant in focus group C responded, "I think it started with trying to find a way to meet the needs of some children who seemed to be falling between the cracks." A teacher in focus group L offered, "It appealed to me." She added she felt it was "just a different way of learning and it was good for kids." The participant in focus group F elaborated, "The mother in me came out because it just seemed so logical that you would teach children from where they are and go forward. It just seemed like the way children or people should learn. . . in a normal way. . . the whole person." Another participant added, "We knew in our hearts and minds multiage was the right thing to do for children." Nine of the participants in this study indicated their choice to teach in a multiage setting was related to job security rather than a belief in a multiage philosophy. Three of the participants noted that they had been hired into an existing multiage position vacated by another teacher and the choice might have been between being offered a job or having no job. Two other focus group participants stated that they had taken their multiage teaching positions to escape other, less desirable, assignments. Four of the teacher participants stated that the multiage program had been implemented at their school due to uneven enrollment in specific grade levels.

Extensive planning and preparation seemed to be an imperative first step in the process of implementing a successful multiage program. In this study, it was found that the amount of time allocated to planning the implementation of the multiage program ranged from several days to several years. During the discussion on planning to implement a multiage program one participant in focus group C suggested that teachers needed to have access to research and that "collecting materials needs to be done a year ahead of time." She also stated that the teacher should "know what you want to do the first year. . .you can build for the following year." A

participant in focus group K noted, "[You need] lots of planning. I mean I would advise anybody who was going to try this--see multiage classrooms. . . .I would give it two years planning going into it. I mean the first year, thinking about it, viewing it. The second year, coming up with your curriculum. . . .I mean the way you want to run things. Just don't come in blind. Go hear the speakers, Jim Grant, and everybody else who does it. Check out how other people do it. Have your goals up in front of you before you begin." A teacher in focus group O said she and a colleague had tried to mesh their two grade-level curriculums together and suggested that "before you do this [multiage], you need to sit down and decide how."

Several participants noted that the concept of looping to the next grade level with their current students appealed to them as a starting-off place before fully implementing a multiage program. A participant in focus group D replied, "Give them a chance to loop; to see the relationships that build." Looping may have solved the problem for the participant in focus group C who indicated that "lack of experience with a particular age level and their curriculum"

was an implementation obstacle. She added, "I had to become familiar with what was expected of them, the curriculum, the materials, what a first grader could and could not do. I mean, it was just a nightmare--it was awful."

An interesting trend noted throughout the focus group interviews was that many of the participants stated they were already implementing many of the critical attributes that made a multiage program successful before they were involved as a teacher in a multiage setting. A teacher in focus group J recalled, "I didn't do anything different because I teach this way in a regular class." She elaborated, "When I observed, it just validated what I was doing in my classroom." One participant in focus group C reflected, "Looking back, if I had to do it over again, I wouldn't try to do multiage and integrated thematic instruction all at one time. . .we tried to do it all at once and it was [too much]."

Participants noted that the selection of students was an important part of the implementation process. Participants commented that multiage classes needed to contain equal numbers of students in terms of grade levels. If classes were

not balanced, a multiage teacher in focus group O commented, "you spend more time with the majority." One participant in focus group M stated, "The main reason I didn't want to do it [multiage] next year is the uneven numbers." Participants also noted the multiage class make-up should be as heterogeneous as possible and reflective of the total school population in terms of gender, race, and/or disability. A participant in focus group E stated, "some of the kids were put in our class to make sure we had enough" of a particular type of student. A member of focus group R responded that they limited the number of students to be equal to the rest of the school but they "didn't limit the types of children."

Parental consent seemed to be another focus of student selection. Many school principals asked parents to apply for admission of their children into the multiage program for a two-year commitment. While discussing parental involvement in the implementation process one participant in focus group D offered, "I think that's very important. . . . We only did it with parent's permission."

Research Question 3

What problems were encountered during the implementation of a primary multiage/nongraded program?

When asked about obstacles that were encountered during implementation of their multiage programs, one participant in focus group H suggested, "a lot of them were obstacles that were not truly there, but we put them in front of ourselves.

We should have written them down; they're gone." Another participant in focus group I stated she had thought, "I taught this way for the last 10 years by golly; it's hard to break out of my mold."

It was notable that the most often stated obstacle to the implementation of a successful multiage class was the lack of understanding and support from other teachers in the school. This concern was stated by the participants in at least twelve of the focus groups. In many of the focus groups the participants noted that the other teachers perceived the multiage teachers were assigned the smartest kids, bestbehaved kids, more money, more planning time, more resources, and were the principal's pets. For instance, a

participant in focus group K noted, "They were jealous. They thought it was this wonderful program that only special people got. . .they don't see me pulling my hair at the end of the day." A teacher in focus group D reported that the other teachers thought "only the top-choiced, non-behavior [no behavior problem] kids got into multiage classes." One participant in focus group C found, "There was some resentment. They [other teachers] thought we got all the best kids." The participant further stated that the principal "bent over backward to try to make things fair, but I think there was a perception anyway that it wasn't fair." Another participant added, "Administrators have to be careful about, you know, creating that little prized group." A teacher in focus group I noted, "some people had to change grade levels so we could implement it [multiage classes] and they did not really want to do that." A participant in focus group A wrote, "It is too difficult to teach without the support of your co-workers!"

Participants in the focus group interviews often identified curriculum as a major obstacle to the implementation of a successful multiage program. One participant in focus group I

noted that there was "no true curriculum." A participant in focus group C stated, "[The] hardest thing [is] to make sure we cover what we need to cover." Another member of focus group C elaborated, "We were so overwhelmed with how much curriculum, we didn't know what to do first." From focus group J, one participant offered, "We're not to the point of being able to have the essential elements out over 2 years because like some of my olders (my first graders this year) were not in the program last year so I cannot assume that they've had it, so I'm having to do the essential elements each year." She added, "You can't assume we're going to have these same children for two years." A multiage teacher in focus group O summarized, "You need to do a curriculum that is based on multiage."

Another curriculum problem identified by several teachers was the lack of materials and books in classroom sets. A participant in focus group L noted, "It would be hard to try to bring a kindergartener up [to the first grade group]. . .because whatever is offered for first grade, we don't each get a set [of workbooks]. We [my teammate and I] get one set and split

them." She added, "It would be ideal that I had a whole kindergarten set and a whole first grade set." She finished with this statement, "Sometimes that's a problem, too, with changing our numbers [in groups]. We have this many workbooks, we have her 9 and my 9; we have 18 workbooks, that's what we have. If we start pulling kids up, we don't have a workbook for them."

A serious obstacle to the implementation of a multiage program was the perceived lack of support from the district. These concerns centered on standardized testing requirements and grade-level curriculum requirements. For instance, while discussing ways to overcome the obstacles to the successful implementation of a multiage program, a participant in focus group M stated, "Throw out the SAT. . . . We feel that they're telling us that these programs are wonderful and we're seeing that they work if you let them work but, then they're telling you 'you better score 50 or higher percent on the SAT'." A participant in focus group P also stated, "but it's different now with SAT. . . . There are some things we're doing now that we don't particularly care for. . . but we're doing them so the kids

won't go into culture shock come the end of March." A participant in focus group C stated, "getting them ready for SAT. . .takes away from the [multiage] program." Another participant in focus group P noted, "[The] hardest is math because there are some things the second graders need to know for SAT."

While discussing district support, a respondent in focus group C stated, "With reading and math I need to cover what the county thinks a second grader needs and if the kid's working on grade level, I'm trying to kind of cover everything, and I feel like we haven't gotten any support from the county." A multiage teacher in focus group O said, "We're doing the county guidelines because we have to cover in first grade all these essential elements; in second grade all these essential elements have to be covered." A teacher in focus group O summarized, "If you truly did multiage, at some point, you would cover. . . what needed to be covered in first grade and needed to be covered in second grade. I don't feel as if I'm truly doing multiage."

One participant in focus group U indicated she felt that the district was in agreement with the multiage philosophy by stating, "I mean the county's philosophies, when you listen to them, fall along those continuous progress lines but what the state is telling us to do [isn't continuous progress]." She added, "They're [district] being the messengers; I think it's ultimately coming from the state."

Another serious concern to multiage teachers was the amount of time needed to properly facilitate a multiage program. Planning time, too much work, and stress were concepts most often used by participants to describe their concern regarding the extensive planning and preparation needed in order to properly facilitate a multiage class. One participant in focus group I commented on working with a teammate and the amount of time it took, "Everything we did had to be negotiated and discussed." One participant in focus group G noted that burnout was a good possibility for a multiage teacher. She stated, "I didn't want to do two sets of lesson plans but I didn't know I was gonna get burn-out trying to do one set for both."

Participants in three separate focus groups discussed the concern of having the multiage classes become a dumping ground for students with problems. An interviewee in focus group L concluded, "We don't want to end up being the dumping ground either for the other first grade classes or kindergartens who say they are not really ready so we'll put them in multiage." A participant in focus group K expressed a similar feeling. She stated, "It still seems to be a dumping ground in my opinion. . .kids, say, in another second or third grade class, if they weren't doing well, put them in multiage. If it doesn't work in multiage, where else to go, keep them there." This was an interesting comment because it was the opposite perception of some of their colleagues. This comment came from a focus group L participant, "[The other teachers] just assumed we had the cream of the crop. . .that we had everything."

One other obstacle noted by the teachers was the concern they might not be meeting all of their students' needs. Some of the participants were concerned about the transition of multiage students to a non-multiage program either during the school year or at the end of the multiage program. Their concern centered on whether or not their students had missed something. A multiage teacher in focus group O offered, "That's why I'm doing both curriculums. It's not fair to the child; if they leave our school that they have missed something because they were in multiage." A 2,3 multiage teacher in focus group E stated, "We'd be remiss if we sent them [to fourth grade] not having a clue about multiplication."

A participant in focus group L who was concerned about her first graders stated, "We've got to make sure they're getting what they need." Participants in at least two focus groups indicated that, in the past, when kindergarten students left school after 5 hours, it allowed the teachers to use the remaining time exclusively for reading instruction with first graders. The participants' concern was that, with the kindergarten students staying in school all day, they had lost some of the instructional time for the older students. One participant in focus group L placed great emphasis on this problem by stating, "The biggest obstacle was finding out kindergarten would be going all day." While discussing the full

day kindergarten a participant in focus group M said, "It's hard to give them [first graders] the extra time they need."

Some of the participants noted that lack of parental support also caused distress in implementing the multiage program. Participants in focus group D offered these comments, "They [parents] really didn't understand the concept and the program." She continued, "[We] decided that it was really a communication problem with the parents and that if you don't have the support of your parents with your program. . .no matter how good a teacher you are, they're going to pull their kid out of there."

Several minor obstacles that were mentioned included problems with identifying children's grade levels for the school office, field trips or special events (such as the symphony performance or guest speakers that might be designated by grade level), not having another class with the same grade configuration to identify with, being "stuck with" a particular student, and physical distance of team teachers' classrooms from each other.

Research Question 4

What staff development activities were most effective in preparing teachers for implementing a primary multiage/nongraded program?

A small number of participants in this study indicated they had no training at all to help them implement the multiage program. One participant in focus group I reported, "I just came in and tried it." The participant also wrote, "I have not had any multiage training. I do not feel as comfortable as I would like to be meeting the needs of both grade curriculums." However, the majority of the participants indicated that they had the opportunity for some training in implementing multiage programs. Several of the participants noted they had training while in college, either in classes or through internships. Others indicated the majority of the training occurred while the decision to implement the program was being made. Many of the participants in this study had the opportunity to attend workshops sponsored by the Society for Developmental Education. A large number of the participants also noted that they had the opportunity to visit other classrooms and other schools, within the county, as well as in

other counties and outside the state. One participant in focus group U recalled, "We all went on the school visitations. I think that helped the most." One participant in focus group O commented, "I went to the [district] support group a couple of times."

Another activity strongly supported by the participants was that of reading current literature. Participants in several groups indicated that their principals had purchased reading materials such as Nongradedness: Helping It to Happen by Anderson and Pavan (1993). Others noted that they had purchased their own reading materials at conferences. Still others found articles in professional journals to read.

A common thread that seemed to be addressed during almost all of the focus groups was a desire for more training regardless of the background, experience, or personal characteristics of the respondents. A participant in focus group P commented, "I would like to have seen, listened, and heard more." While discussing her attendance at a professional conference she added, "The gal was good. . .she was geared to her centers and we were looking more for

classroom management, how to work with groups." She further elaborated on visitations, "You have to have a lot of visitations to conferences or even people to gather as much as you can to sort through what you feel is good."

Research Question 5

What were the advantages and disadvantages of a primary multiage/nongraded program for students?

Participants overwhelmingly identified the social factors of "security," "belonging," "continuity," "bonding," "trust," "community," "self-confidence," and "self-esteem," as benefits of a multiage setting for students. One participant in focus group H stated, "You can ask any child. . .in this class, what this group is built on and any one of them will tell you 'trust'; . . .That this whole thing we've developed is based on trust." Also from a participant in focus group H came this comment, "I like the meshing of so many abilities. I like the family feeling. I like the cooperation I see between the children."

Participants also described the multiage environment as being a place where children are free to take risks. One participant in focus group L noted, "I see more risk-takers."

One respondent in focus group K added, "They're happy kids and that makes it a better environment for them to learn.

They're happy and they're risk-takers. . . . They're not afraid to ask 'why' or 'what if' or 'I'd like to try it this way.'. . . They're always like, 'Yeah, we can do that'." During the focus group R session, one interviewee commented, "there's a lack of pressure. . . . I really provide a risk-free environment. . . . I've created an atmosphere where these kids really believe in themselves." In focus group H, a participant noted, "The children are self-motivated and directed. They take responsibility for their learning. They can more freely work at the level they are comfortable."

Advantages for younger students in a multiage class included the fact the students were exposed much earlier to some needed skills and essential concepts. An interviewee in focus group M answered, "All my kindergarteners are higher than any kindergartener coming in before--from all the modeling of the first graders." A multiage teacher in focus group M noted, "the reinforcement/practice the older kids get from helping the younger has been extremely beneficial."

Participants noted that in multiage classes, teachers were very sensitive to the needs of all students. A participant in focus group J stated, "We look at them differently. I know that I have children in my room, that if they were in a traditional class, they would be in detention every day."

Academically, participants noted that there were no upper limits on what learning was taking place. A participant in focus group J reported, "You aim for the high and teach to the high. . . . " One 2,3 teacher in focus group I replied, "The boundaries are taken away. We're doing multiplication and we're doing all the multiplication facts." She expanded on this statement by adding that whatever each student was ready to master was what he or she worked on. A participant in focus group L noted, "[I was] more open to challenging my kids." In focus group M, a teacher wrote, "The children are starreachers--never settling for anything less--the enthusiasm to learn has seemed larger in a multiage class versus a traditional! The children are always seeking knowledge." In focus group J, a multiage teacher noted, "The learning among children is incredible."

Disadvantages of the multiage program for students appeared to be hard to identify. When asked the question, most participants took time to think and concluded that they couldn't identify any that were inherent in the multiage structure itself. One participant who did respond mentioned that sometimes the older students' behavior regressed or sometimes the younger students saw inappropriate behavior from the older students. Due to the emotional bonding which occurred, the difficulty the children and their teacher had in separating when students moved to another class was mentioned by the participants in one group as a slight disadvantage of the multiage program.

Research Question 6

What were the advantages and disadvantages of a primary multiage/nongraded program for teachers?

Good discipline seemed to be the primary advantage of a multiage class for teachers. In focus group J, one teacher stated, "the behavior problems are minimal." Many of the participants noted that it was perceived by other teachers that multiage classes had the best-behaved children. However, the

participants in this study firmly stated that they worked very hard to create a feeling of "family" or "community" and that was why the classes seemed to operate so smoothly.

Participants in focus group H discussed how they had spent the whole first week of school "building community." One of the participants noted, "All day long, we [my teammate and I] point out behaviors that the children are doing. . .point out examples of what our expectations are." While discussing the positive behavior in the multiage class during focus group J, one participant offered, ". . .it's cooperative learning and the whole way the class is set up. Because it's developmental and meeting their needs, you don't have the off-task behavior that you might have in a traditional classroom." Another comment from a focus group J participant was, "A key is that we've removed the competition from our rooms. . . .We're there to help teach others in a family, community [setting]."

Several participants noted that a multiage setting gave
them permission to do what they feel is right for students.

One interviewee in focus group J expressed, "I taught DK
[developmental kindergarten] and I've always felt I was being

made to run first grade inappropriately and it was like when multiage was here, it was like. . . this is appropriate." A multiage teacher in focus group U noted, "Multiage has allowed me to feel okay about doing my thing; starting with them where they are and working with them and getting them as far as they can go."

One participant in focus group M reflected about the rewards of teaching in a multiage class, "People read the stories my second grade kids write and they're just in awe. I mean I'm in awe. Sometimes like I'm reading it and like getting teary-eyed thinking, 'How did you do this?' It's so rewarding." In focus group C, a participant wrote, "[multiage is] lots of work but so exciting to see the growth in students over the 3 year span."

Another advantage that was mentioned by multiage teachers in their classes was the decreased amount of lost time at the beginning of each year usually spent getting to know each student's personality and academic needs. As one participant in focus group L reflected, "I didn't spend the first three weeks explaining every single detail. I had half the kids

who already knew. For the first graders, I knew exactly where they were. I knew what they needed." A participant in focus group F concurred, "It's wonderful to have those children again the second year. . .and knowing where those kids are and not having to evaluate and go through that 9 weeks process getting to know them and they know what you want and they can help those kids coming in. . .it really makes the beginning of the year much faster."

The amount of time needed for planning and preparing materials seemed to be the most frequently mentioned disadvantage of multiage teaching for teachers. When asked about disadvantages of the multiage program for teachers, one participant in focus group P responded, "Time. . .for planning; time for conferring with each other." A participant in focus group C stated, "It takes an enormous amount of planning." Another participant in focus group C added, "adequate planning time. The hindrance that I see right now, that I would love to have more time is that I do not have a set curriculum in front of me to enhance. . . .We're planning and creating all brand new things every year and we're on a 3-year

cycle." A participant in focus group C recorded simply, "It is a lot of extra work outside of the classroom--planning time."

Summary

A composite of the participants in this study showed that a multiage teacher in this large central Florida public school district tended to be a female who was less than 30 years of age. This teacher had a bachelors degree and was certified in elementary education, early childhood education, or both. She had between 1 and 5 years total teaching experience with 2 years teaching experience in a multiage setting. She taught either a K,1 or 2,3 multiage class and was likely to seek another multiage teaching assignment if hers were discontinued.

The results of this study indicated that the multiage classroom did not look the same for all schools or teachers; however, many of the same critical attributes were found in successful programs. Team teaching, whole language strategies, cooperative learning, peer tutoring, authentic assessment, and continuous progress were components

identified by participants as critical attributes in successful multiage classrooms.

When discussing implementation strategies, participants commented on the importance of involving teachers in the decision to implement the multiage program. Other strategies included parental involvement, student selection, time to plan for implementation of the multiage program, and teacher preparation.

Teacher preparation activities most often mentioned as beneficial were attendance at professional conferences, visitations to other schools, and reading current literature. Participants also noted that implementing the multiage/nongraded program was easier if the critical attributes (such as integrated thematic teaching and whole language instruction) had already been implemented in the traditional graded setting.

Benefits to students noted by focus group participants
were in social and academic areas. Social benefits expressed
by focus group participants included a feeling of belonging as
in a family or community, the ability to work cooperatively as

part of a group, and the acceptance of individual strengths and weaknesses. Academic benefits noted by teachers included the exposure to skills and concepts more often and at an earlier age. An important benefit to teachers was an improvement in student discipline. A disadvantage to teachers indicated by the study was the lack of adequate planning time.

Chapter IV described the data analysis of the results of the focus group interview sessions. Chapter V presents a discussion of the results of the study and recommendations for practice and further study.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Statement Of The Problem

This study sought to identify the (a) critical attributes of a successful multiage/nongraded program, (b) strategies necessary for successful implementation of the program, (c) inservice training needed by teachers to implement a successful program, (d) obstacles encountered during implementation, (e) advantages and disadvantages of a multiage/nongraded program for students, and (f) advantages and disadvantages of a multiage/nongraded program for teachers.

Population

The population for this study consisted of public school teachers of primary multiage classes in a large central Florida school district who participated in focus group interviews and completed a demographic questionnaire. A total of 58

teachers of multiage classes in 20 elementary schools participated in this study.

Data Collection and Instrumentation

Data for this study were obtained during focus group interviews. A focus group Interview Guide, which served as the protocol for each focus group interview session, was developed by this researcher after a thorough review of related literature. Question 1 on the interview guide served as an introductory question. Questions 2, 3, 4, and 5 focused heavily on the research questions of the study. Question 6 brought closure to the interview sessions by allowing each participant one final opportunity to offer additional information the participant felt the researcher might need. Question 7 served as a summary question.

In December 1995, principals in schools with multiage classes were notified of this researcher's intent to interview teachers regarding the implementation of multiage programs. Principals were given the opportunity to object to the researcher contacting teachers in their schools for interviews. All principals supported their teachers' participation. In

January 1996, teachers of multiage classes were sent a letter stating the researcher's intent to contact them to set up an appointment for the focus group interview. Focus group interviews began in January 1996 and concluded in April 1996.

In addition to participating in a focus group interview session, participants completed a brief questionnaire.

Responses on the questionnaire allowed the researcher to gain demographic information about the teacher and his/her class.

The final question was intended to allow respondents to identify their program of choice--multiage or graded--and to offer supporting reasons.

Summary and Discussion of the Findings

A summary and discussion of findings in regard to the questionnaire and six research questions follows.

Questionnaire

Results of the demographic questionnaire indicated that a multiage teacher in this large central Florida public school district was most likely to be a female who was less than 30

years of age. This teacher had a bachelors degree and was certified in either elementary education, early childhood education, or both. This multiage teacher had between 1 and 5 total years of teaching experience with 2 years of teaching experience in a multiage setting. She would be teaching either a K,1 or 2,3 multiage class and would seek another multiage teaching position if hers were discontinued.

Research Question 1

What were the critical attributes of a successful primary multiage/nongraded program?

Participants in this study noted that, although there were many of the same critical attributes in all multiage classes, there was not one preferred way to organize the class or one preferred way for the teacher to function. Participants stated that each teacher needed to identify what worked best for each individual. Participants further stated that each individual's idea of multiage was different.

Many of the participants identified team teaching as a critical attribute of a successful multiage/nongraded program. It was noted that, in some cases, participants were teaching in

multiage classes because the teachers with whom they wanted to work were involved in a multiage program. Participants indicated that it was important to have someone else with whom they could take risks. Most importantly, they indicated that having a teammate provided support to them as multiage teachers.

Two other critical attributes of a successful multiage/
nongraded program were developmental appropriateness and
continuous progress. Although these two concepts were
responsible for many of the participants becoming involved in
the program, it was noted that these two components were
probably the most difficult to implement. Grade level
expectations and standardized test requirements identified at
both the state level and the local level became obstacles to
teaching students at their individual developmental levels and
in a continuous manner.

One of the most popular teaching strategies mentioned by the participants was integrated thematic instruction. Several participants noted they felt that the two most critical attributes of a successful multiage/nongraded program were team teaching and integrated thematic instruction.

Another instructional strategy named by participants in almost all groups as being critical to the success of the multiage/nongraded program was whole language. One participant, representing many, who felt very strongly regarding this component, noted she felt "it was very important for multiage teachers to be whole language teachers."

Cooperative learning, peer tutoring, and flexible grouping were noted as being critical to the success of the multiage program. Due to the differing ages and abilities of students, teachers felt that these strategies were crucial to the efficiency of a multiage class and allowed the teacher to enhance each student's strengths.

Research Question 2

What strategies were necessary for the successful implementation of a primary multiage/nongraded program?

In the review of literature it was noted that those teachers who would potentially be involved in teaching multiage classes should be involved in the decision to implement. However,

many of the participants in the study indicated they had not been available during the decision-making process. Therefore, the reasons they were involved in the program were analyzed. The reasons ranged from a belief in the multiage concept to job security. One teacher noted that "you have to feel it here [in the heart]." Another noted that the multiage teaching position was the only one available at the time.

Extensive planning was noted by participants as an important implementation strategy. Participants in this study noted that the amount of time to plan for implementation of the multiage program ranged from no time to several years. At least one participant noted that the concept of looping might be a way to gradually implement a multiage program. An interesting trend noted throughout the focus group interviews was that many of the participants stated they were already implementing many of the components (i.e., integrated thematic instruction, whole language, and hands-on mathematics) that make a multiage program successful before they were in a multiage setting. This seemed to be very helpful

in gradually having prepared them for implementation of a multiage program.

Participants also noted that the selection of students was an important part of the implementation process. They felt that multiage classes needed to reflect the rest of the student body in terms of race, gender, ability, and number in the class.

Research Question 3

What problems were encountered during the implementation of a primary multiage/nongraded program?

The most often mentioned obstacle was the lack of support from other teachers in the school. Other teachers not assigned to multiage classes erroneously perceived that multiage teachers were assigned the best-behaved and smartest students in the school; they also felt that multiage/nongraded teachers received more money or planning time.

Curriculum appeared to be a major obstacle to the implementation of a successful multiage/nongraded program. Participants reported that there was no multiple-year curriculum. Teachers' wished to ensure that students were prepared for the next grade level; thus, they taught at the

students' instructional levels and then introduced other skills for which students were not developmentally ready but would be expected to perform when they reached the next grade level in a traditional system. A lack of books and materials was also named as an implementation problem.

Multiage teachers named lack of support from the district as a serious obstacle to the implementation of a successful multiage/nongraded program. Of critical concern was the emphasis that had been placed on SAT scores.

A final serious obstacle to the implementation of a successful multiage program identified by multiage teachers was the large amount of time that was needed in order to implement the program properly. Participants reported they spent many unpaid hours planning and preparing for instruction in their multiage program.

Research Question 4

What staff development activities were most effective in preparing teachers for implementing a primary multiage/nongraded program?

Participants indicated that attendance at workshops, visitations to other schools, and reading current literature

were considered essential staff development activities for the new multiage teacher. The focus group interviews revealed that a combination of all of the inservice activities were necessary in order to give the new multiage teacher as much information as possible. These professional development opportunities supported participants as they implemented the individual critical components of a multiage program before a full implementation of the multiage program. One participant expressed the feelings of many when she noted that, even though she had received much training, she wanted more.

Research Question 5

What were the advantages and disadvantages of a primary multiage/nongraded program for students?

Social factors were the most often mentioned benefits of a primary multiage/nongraded program for students.

Participants overwhelmingly noted factors such as "family," "community," "trust," "self-esteem," and "risk-takers" as benefits of the multiage class for students. Academic advantages were noted because there were typically no upper

limits on the learning that takes place in a multiage setting.

In addition, skills and concepts were often introduced earlier in a multiage setting than they would be in a traditional graded class.

Disadvantages for students in the multiage setting were hard to identify. One participant, who had spent as many as three years bonding with her students, noted that it was difficult to separate when it was time for the students to move to a different class.

Research Question 6

What were the advantages and disadvantages of a primary multiage/nongraded program for teachers?

Good student discipline was noted as the most obvious advantage of a multiage/nongraded setting for teachers.

Though other teachers perceived that the multiage classes did not have discipline problems, multiage teachers indicated they worked very hard on a daily basis to establish "family" and to eliminate competition. Both efforts appeared to improve discipline. In addition, participants noted that the use of developmentally appropriate activities which afforded children

opportunities to experience success was a deterrent to off-task behavior.

Several participants noted that multiage teaching gave them permission to exercise their professional judgement as it related to appropriate content and learning activities for their students. Participants also cited their familiarity with students at the beginning of the school year as an advantage in that less time was used in identifying students' needs than would have been in a traditional classroom.

The single disadvantage to teachers identified by participants was the extensive time commitment that was required of multiage/nongraded teachers for planning and preparing materials. Participants commented that daily planning, scheduling, and coordinating for an environment which included thematic teaching, whole language instruction, cooperative learning, hands-on activities, developmentally appropriate practices, and the other critical attributes of a multiage program took more time than planning for a traditional classroom setting. Participants also noted they

were willing to spend the extra time to plan because the rewards of teaching in a multiage setting were great.

Conclusions

This study sought to identify the (a) critical attributes of a successful multiage/nongraded program, (b) strategies necessary for successful implementation of the program, (c) inservice training needed by teachers to implement a successful program, (d) obstacles encountered during implementation, (e) advantages and disadvantages of a multiage/nongraded program for students, and (f) advantages and disadvantages of a multiage/nongraded program for teachers. Based on a review of the literature and research findings, the following conclusions were determined:

1. The strongest conclusion that was revealed by the data was the fact that, in general, those who were comfortable teaching in a multiage setting and who would seek another multiage position if theirs was no longer available believed in the philosophy of the multiage/nongraded concept. However, the challenges

- to implementation were strong enough to cause even the most devoted to return to a single-grade classroom.
- 2. The greatest obstacle seemed to be in dealing with the limitations placed upon teachers and students in the form of district and state accountability mandates.
 These mandates included: retention, grade-level curriculum requirements, below grade-level labels, standardized testing, and traditional reporting of student progress.
- 3. Teachers also commented on the lack of acceptance of the multiage concept by other educators as a strong obstacle. This lack of understanding could result in sabotage of the program by non-multiage teachers.
- 4. Although mentioned frequently as a disadvantage to teachers and an obstacle to implementation, the additional time teachers spent planning and preparing did not seem to be a deterrent to their desires to continue with the program.
- Participants overwhelmingly related that the multiage/ nongraded program was advantageous to students in

- regard to their self-concepts, acceptance of others, and ability to participate as a contributing member of a group.
- 6. Participants in this study also noted that the critical components of a successful multiage program included those noted in the review of related literature, including, but not limited to, developmentally appropriate practices, continuous progress, integrated thematic instruction, whole language, hands-on mathematics, and peer tutoring. Participants noted it was easier to implement the total multiage program if the individual critical components had already been implemented in a previous setting.
- 7. It was concluded that a combination of all types of inservice activities, including attending conferences, going on visitations, and reading current literature, was necessary to give new multiage teachers the knowledge and time to implement the critical attributes of the multiage program before implementing the total multiage program. These inservice opportunities

- also allowed participants sufficient time to plan for the implementation of the multiage concept.
- 8. The only disadvantage of the multiage program that was noted for students was an apparent difficulty in leaving the class to move on to the next level due to the strong bonding that had occurred among the classmates and the teacher.
- 9. It was concluded that a large amount of time was needed to plan for the implementation of a multiage program. Teachers need time to attend professional development activities, implement the critical instructional strategies, and communicate with other staff members and parents regarding the multiage concept.
- 10. It was concluded that the behavior of students in the multiage classes was positive because teachers worked hard to promote a "community" feeling and because students were working at their own appropriate instructional levels.

Implications and Recommendations for Practice

Based on the findings of the present study and supported by a review of the related literature, the following recommendations are made:

- A multiage program should be implemented based on a belief in its developmentally appropriate philosophy and continuous progress component.
- Adequate time for implementation of the multiage program must be provided in order to involve all stakeholders, including teachers, parents, and students.
- 3. The majority of the critical components (i.e., continuous progress, developmentally appropriate practices, integrated thematic teaching, whole language, hands-on mathematics, and team teaching) of a successful multiage program should have been implemented by teachers in other classroom settings before implementation of the multiage program.

- 4. Teachers must be provided with as many professional growth activities as needed to ensure successful implementation of the multiage program.
- 5. Teacher teams must be composed of teachers with compatible teaching/learning styles and with teachers who have chosen to implement the program.
- 6. Multiage classes should reflect the rest of the school in regard to the number of students in the class, the number of minority students, the number of boys and girls, the number of students with disabilities, and the number of students in each grade level.
- 7. Looping should be considered as a possible first step toward the total implementation of a multiage program.
- 8. Parents should be offered a choice of placing their children in a multiage or single-grade class.
- 9. District and state mandates and curriculum which are grade-level based should be waived or modified to meet the intent of the developmentally appropriate practices which are the essence of the multiage concept.

Recommendations for Future Research

During the course of this research, several ideas for further research emerged. Based on the findings and conclusions, the researcher offers the following recommendations for future study.

- A study could be undertaken to determine the longterm effects of multiage grouping on students' standardized test scores.
- A study is recommended to determine why multiage configurations appear to be accepted, as well as successful, in exceptional education classes.
- 3. Further research could be undertaken to determine the high school graduation rate of students who had participated in primary multiage/nongraded programs.
- 4. A study could be undertaken to identify the strategies necessary to successfully implement inclusion of all students in a multiage/nongraded setting.
- Further study could be undertaken to identify the obstacles encountered by special area teachers (i.e., music, art, physical education, computer, guidance,

- and media) when implementing the multiage/ nongraded concept.
- Additional study could be undertaken to identify the most successful grade and/or age combinations for multiage/nongraded configurations.
- 7. Another study could be undertaken to replicate this research in the intermediate grades (4, 5, and 6).
- 8. Research is recommended to determine the relationship between teachers' beliefs about how children learn and their successful implementation of multiage/nongraded programs.
- 9. Further study should be undertaken to determine the advantages of implementing the looping concept which would minimize the effects of a major organizational change and yet maximize the continuous progress attribute of a multiage/nongraded setting.
- 10. A study should be undertaken to determine how to apply the Florida Department of Education curriculum frameworks entitled "Sunshine State Standards" to the curriculum component of the multiage program.

- 11. Research could be undertaken to determine the personal characteristics of successful multiage/ nongraded teachers.
- 12. A study could be undertaken to determine the role of the classroom teacher in a multiage/nongraded setting.
- 13. It is recommended that further study be undertaken to determine the role of the building administrator in the successful implementation of a primary multiage/nongraded program.

APPENDIXES

APPENDIX A INTERVIEW GUIDE

INTERVIEW GUIDE

 Let's talk about how you became interested in the multiage concept and how it was decided that you and/or your school would begin the multiage program.

(Probes: philosophy of child growth and development, beliefs about how children learn, personal visions of a multiage setting, beliefs about retention, voluntary participation, administrator/faculty/parent input and support, etc.)

How did you prepare for the implementation of the multiage program?

(Probes: length of time for planning, inservice opportunities, activities/meetings, suggested changes, etc.)

3. What obstacles did you encounter in implementing the multiage program?

(Probes: other teacher's attitudes, support, curriculum, mandates, time, money, etc.)

4. What do you feel are the most important instructional components of a successful multiage program?

(Probes: continuous progress, developmentally appropriate activities, authentic assessment, whole language, integrated curriculum, cooperative grouping, ability grouping, flexible grouping, manipulative-hands/on approach, multiple intelligence strategies, project approach, etc.)

(continued...)

5. What advantages and disadvantages for students have you observed in the multiage class?

(Probes: peer tutoring, role models, patience, acceptance, flexibility, individual pace, positive attitudes toward school, self, and others, etc.)

6. How has teaching in a multiage program changed your teaching and/or planning?

(Probes: amount of planning time, team-teaching, team-planning, schedule, organization, etc.)

7. Is there anything else you'd like to discuss?

(Please note: This is a condensed form of the interview guide. The actual interview guide was set up so that each question was on a different page which contained lines for ease in taking field notes and in handling the data analysis).

APPENDIX B QUESTIONNAIRE

Dear Multiage Teacher,

Thank you for agreeing to share your interest and experience in multiage programs. Your input will be valuable to those who are gathering data and planning for implementation.

Please complete the brief profile below before you leave our

e	Thanks! Vicki				
	. What is your age? □Below 30 □30-39 □40-49 □50-	-59	□60-	69	□Over 69
	What is your sex? □Male □Female				
	What is your highest educational degree? □Bachelors □Masters □Specialists □Doctorate				
	What ages do you currently teach?	111	1 2	□ 13	3+
	What traditional grade levels do you currently teach? □K □1 □2 □3 □4 □5 □6				
	How many years experience do you have in the field of teaching (including this year)?				
	How many years experience do you have teaching in a multiage class (including this year)?				
	In what areas do you currently hold tea	achin	g cert	ifica	tion?
	If your multiage program were disconting another multiage teaching assignment? If yes, why do you prefer the multiage program were disconting another multiage) (☐ Yes		
	If <u>no</u> , why do you prefer the graded con	ncept?) _		

APPENDIX C MEMORANDUM TO PRINCIPALS

C&QUINA ELEMENTARY SCHOOL

850 Knox McRae Drive . Titusville, FL 32780-6407

(407) 264-3060

FAX (407) 264-3062

Vicki H. Osborne, Principal

Patricia C. Mudrak, Assistant Principal

December 8, 1995

MEMORANDUM

To:

Selected Elementary Principals

From:

Vicki Osborne

Re:

Interviews of Multiage Teachers

Although the concept of teaching in a multiage setting is not new, many questions regarding the implementation of a successful multiage program still exist.

I am currently doing research on the topic of implementing a multiage program and have found that those in the field have many wonderful suggestions that would helpful to their colleagues who wish to begin.

I would like to contact your multiage teachers to discuss such topics as how they became interested in teaching a multiage class, how their classes are organized, how they make curriculum adjustments to meet state and district mandates including curriculum frameworks and standardized testing, what inservice activities are most beneficial to them, and what obstacles they have encountered during implementation. All information will be strictly confidential. Only group data will be analyzed. No reference to any school or individual will be made in the analysis of data.

If you object to my meeting and/or talking with your teachers, please notify me by Friday, December 15, 1995. Due to the amount of time it will take to meet with all of the multiage teachers in the district, I hope to begin as early in January as possible.

Thank you in advance for your help. I would be delighted to share my findings with you and/or your staff.

I hope you enjoy the holiday season.

ALL STUDENTS CAN LEARN AND SUCCEED, BUT NOT ON THE SAME DAY IN THE SAME WAY

A Brevard County Public School . An Equal Opportunity Employee

APPENDIX D LETTER TO TEACHERS

C&QUINA ELEMENTARY SCHOOL

850 Knox McRae Drive .

Titusville, FL 32780-6407

(407) 264-3060

FAX (407) 264-3062

Vicki H. Osborne, Principal

Patricia C. Mudrak, Assistant Principal

December 15, 1995

Dear Multiage Teacher,

You are among the growing number of teachers across the country who has chosen to become a teacher in a multiage class thereby demonstrating your understanding of how children learn and grow and your deep commitment to do what is developmentally appropriate and educationally sound for children. Congratulations!

Please help spread the word. I am currently involved in conducting research on the factors that contribute to the implementation of a successful multiage program. Your responses during group interviews will provide valuable information. More importantly, the combined responses from all Brevard County School District multiage teachers will help make future colleagues successful too!

Your input will be strictly confidential. Only group data will be analyzed and no reference to any school or individual will be made in the analysis of data.

I will be contacting you during the next few weeks to determine the most convenient time for us to get together. I'm looking forward to our discussion.

Sincerely,

Vicki H. Osborne

UCF Ed.D. Candidate

Dr. George E. Pawlas

UCF Professor

"ALL STUDENTS CAN LEARN AND SUCCEED, BUT NOT ON THE SAME DAY IN THE SAME WAY:"

A Brevard County Public School • An Equal Opportunity Employer

LIST OF REFERENCES

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- Anderson, R. H. (1993). The return of the nongraded classroom. <u>Principal</u>, 72(3), 9-12.
- Anderson, R. H., & Pavan, B. N. (1993). <u>Nongradedness:</u> <u>Helping it to happen.</u> Lancaster, PA: Technomic.
- Appalachia Educational Laboratory. (1991). Ungraded classrooms -- Fail-safe schools? In D. Sumner (Ed.),

 <u>Multiage classrooms: The ungrading of America's schools</u>
 (pp. 88-90). Peterborough, NH: Society for Developmental Education.
- Bacharach, N., Hasslen, R. C., & Anderson, J. (1995).

 <u>Learning together: A manual for multiage grouping.</u>

 Thousand Oaks, CA: Corwin.
- Balow, I. H., & Schwager, M. (1990). Retention in grade: A failed procedure. In R. J. Reitz (Ed.), <u>Retention in grade:</u>
 <u>Looking for alternatives</u> (pp. 7-50). Bloomington, IN: Phi
 Delta Kappa Center for Evaluation, Development, Research.
- Banks, J. C. (1995). <u>Creating the multi-age classroom.</u> Edmonds, WA: Creative Activities and Teaching Strategies (CATS).
- Bingham, A. A. (1995). Exploring the multiage classroom. New York: Stenhouse.
- Black, S. B. (1993). Beyond age and grade. <u>The Executive</u> Educator, 15(9), 17-20.
- Bogdan, R. C., & Biklen, S. K. (1992). Qualitative research for education: An introduction to theory and methods (2nd ed.). Needham Heights, MA: Allyn and Bacon.

- Bredekamp, S. (Ed.). (1987). <u>Developmentally appropriate</u>

 <u>practice in early childhood programs serving children from birth through age 8.</u> Washington, D.C.: National Association for the Education of Young Children.
- Bridge, C. A., Reitsma, B. A., & Winograd, P. N. (1993).

 <u>Primary thoughts: Implementing Kentucky's primary program.</u> Kentucky: Department of Education.
- Burruss, B., & Fairchild, N. (1993). <u>The primary school: A resource guide for parents.</u> Lexington, KY: The Prichard Committee for Academic Excellence and The Partnership for Kentucky School Reform.
- Calkins, T. (1992). Off the track: Children thrive in ungraded primary schools. The School Administrator, 49(5), 9-13.
- Chase, P., & Doan, J. (1994). <u>Full circle: A new look at multiage education</u>. Portsmouth, NH: Heinemann.
- Cohen, D. (1989). First stirrings of a new trend: Multi-age classrooms gain favor. <u>Education Week, 9(14)</u>, 13-15.
- Connell, D. R. (1987). The first 30 years were the fairest: Notes from the kindergarten and ungraded primary (K-1-2). Young Children, 42(5), 30-39.
- Cuban, L. (1989). The "at-risk" label and the problem of urban school reform. Phi Delta Kappan, 70(10), 780-784, 799-801.
- Cushman, K. (1990). The whys and hows of the multi-age primary classroom. American Educator, 14(2), 28-32, 39.
- Daniel, T. C., & Terry, K. W. (1995). <u>Multiage classrooms by</u> <u>design: Beyond the one-room school.</u> Thousand Oaks, CA: Corwin.
- Davis, R. (1992). <u>The nongraded primary: Making schools fit children.</u> Arlington, VA: American Association of School Administrators.

- Denzin, N. K., & Lincoln, Y. S. (Eds.). (1994). <u>Handbook of qualitative research</u>. Thousand Oaks, CA: Sage.
- Ganapole, S. J. (1989). Designing an integrated curriculum for gifted learners: An organizational framework. Roeper Review, 12(2), 81-86.
- Gardner, H. (1983). <u>Frames of mind: The theory of multiple intelligences.</u> New York: Basic Books, Inc.
- Gaustad, J. (1992a). Nongraded education: Mixed-age, integrated, and developmentally appropriate education for primary children. <u>Oregon School Study Council Bulletin</u>, 35(7).
- Gaustad, J. (1992b). Making the transition from graded to nongraded primary education. <u>Oregon School Study</u> <u>Council Bulletin, 35</u>(8).
- Gaustad, J. (1994). Nongraded education: Overcoming obstacles to implementing the multiage classroom (Special issue). Oregon School Study Council Bulletin, 38(3 & 4).
- Goodlad, J. I. (1984). A place called school. New York: McGraw-Hill.
- Goodlad, J. I., & Anderson, R. H. (1987). <u>The nongraded</u> <u>elementary school.</u> New York: Teachers College, Columbia University.
- Grant, J., & Johnson, B. (1995). A common sense guide to multiage practices: Primary level. Columbus, Ohio: Teachers.
- Grant, J., Johnson, B., & Richardson, I. (1995). <u>Multiage</u> <u>questions and answers: 101 Practical answers to your most pressing questions.</u> Peterborough, NH: Crystal Springs Books.
- Heald-Taylor, G. (1989). An administrator's guide to whole language. Katonah, NY: Owen.

- Holmes, C. T., & Matthews, K. M. (1984). The effects of nonpromotion on elementary and junior high school pupils: A meta-analysis. In R. J. Reitz (Ed.), Retention in grade: Looking for alternatives (pp. 51-62). Bloomington, IN: Phi Delta Kappa Center for Evaluation, Development, Research.
- Hord, S., Rutherford, W., Huling-Austin, L., & Hall, G. (1987). <u>Taking charge of change</u>. Austin, TX: VictorGraphics.
- Hunter, M. (1992). How to change to a nongraded school. Alexandria, VA: Association for Supervision and Curriculum Development.
- Jeanroy, D. (1996) The results of multiage grouping: An elementary school principal documents the outcomes of meeting students' developmental needs. <u>The School Administrator</u>, 53(1), 18-19.
- Johnson, D. W., & Johnson, R. T. (1994). <u>Learning together</u> and alone: Cooperative, competitive, and individualistic <u>learning</u>. Needham Heights, MA: Allyn and Bacon.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1994). The new circles of learning: Cooperation in the classroom and school. Alexandria, VA: Association for Supervision and Curriculum Development.
- Kamii, C., Manning, M., & Manning, G. (Ed.). (1991). <u>Early literacy</u>: A constructivist foundation for whole language. Washington, D.C.: National Education Association.
- Kasten, W. C., & Clarke, B. K. (1993). <u>The multi-age</u> classroom: A family of learners. Katonah, NY: Owen.
- Katz, L. G., Evangelou, D., & Hartman, J. A. (1990). <u>The case for mixed-age grouping in early education</u>. Washington, D. C.: National Association for the Education of Young Children.

- Kovalik, S. (1994). <u>ITI: The model -- Integrated thematic instruction</u> (3rd ed.). Arizona: Susan Kovalik & Associates.
- Krueger, R. A. (1994). Focus groups: A practical guide for applied research (2nd ed.). Thousand Oaks, CA: Sage.
- Lodish, R. (1992). The pros and cons of mixed-age grouping. Principal, 71(5), 20-22.
- Lofland, J., & Lofland, L. H. (1995). <u>Analyzing social settings:</u>
 <u>A guide to qualitative observation and analysis</u> (3rd ed.).
 Belmont, CA: Wadsworth.
- Lolli, E. ("n.d.") Multiage: Why it's needed. In D. Sumner (Ed.) (1993), Multiage classrooms: The ungrading of America's schools (pp. 15-16). Peterborough, NH: Society for Developmental Education.
- Maeda, B. (1994). <u>The multi-age classroom: An inside look at one community of learners.</u> Cypress, CA: Creative Teaching.
- Maling, B. (1990). Looking back before stepping forward:
 Lessons from the open education reform movement of the
 1970s. In J. McDonald (Ed.), Open education as a
 component of restructuring (pp. 87-93). Bloomington, IN:
 Phi Delta Kappa.
- Martin, L. S., & Pavan, B. N. (1976). Current research on open space, nongrading, vertical grouping, and team teaching. Phi Delta Kappan, 57(5), 310-314.
- McLean, L. (1990, May). Student evaluation in the ungraded primary school: The SCRP Principle. Paper presented at the Second Canadian Conference on Classroom Testing, University of British Columbia Centre for Applied Studies in Evaluation (CASE), Vancouver, BC.
- Milburn, D. (1981). A study of multi-age or family-grouped classrooms. Phi Delta Kappan, 62(7), 513-514.

- Miller, B. (1990). A review of the quantitative research on multigrade instruction. In D. Sumner (Ed.), <u>Multiage</u> classrooms: The ungrading of America's schools (pp. 65-72). Peterborough, NH: Society for Developmental Education.
- Miller, B. (1994). <u>Children at the center: Implementing the multiage classroom.</u> Portland, OR: Northwest Regional Educational Laboratory.
- Moll, L. (Ed.) (1994). <u>Vygotsky and education: Instructional</u> <u>implications and applications of sociohistorical psychology</u>. New York: Cambridge University.
- Nachbar, R. R. (1989). A K/1 class can work -- wonderfully! Young Children, 44(5), 67-71.
- National Association of Elementary Principals (1990). <u>Early childhood education and the elementary school principal: Standards for quality programs for young children.</u>
 Alexandria, VA: Author.
- National Council of Teachers of Mathemathis (1991).

 Professional standards for teaching mathematics. Reston,
 VA: Author.
- O'Neil, J. (1992). On tracking and individual differences: A conversation with Jeannie Oakes. <u>Educational Leadership</u>, <u>50(2)</u>, 18-21.
- Ostrow, J. (1995). A room with a different view: First through third graders build community and create curriculum.

 New York: Stenhouse.
- Pavan, B. N. (1992). The benefits of nongraded schools. Educational Leadership, 50(2), 22-25.
- Politano, C., & Davies, A. (1994). <u>Multi-age and more:</u> <u>Building connections.</u> Winnipeg, Canada: Peguis.

- Pratt, D. (1986). On the merits of multiage classrooms.

 Research in Rural Education, 3(3), 111-115.
- Rathbone, C., Bingham, A., Dorta, P., McClaskey, M., & O'Keefe, J. (1993). <u>Multiage portraits: Teaching and learning in mixed-age classrooms</u>. Peterborough, NH: Crystal Springs Books.
- Settle, J. C. (1995). An exploratory case study of professional development and other critical elements in the implementation of the primary program in eight public Kentucky elementary schools. Unpublished doctoral dissertation, University of Kentucky, Bowling Green.
- Shepard, L. A., & Smith, M. L. (1987). Effects of kindergarten retention at the end of first grade. In R. J. Reitz (Ed.), Retention in grade: Looking for alternatives (pp. 63-74). Bloomington, IN: Phi Delta Kappa Center for Evaluation, Development, Research.
- Slavin, R. E. (1990). <u>Cooperative learning: Theory, research, and practice.</u> Englewood Cliffs, NJ: Prentice-Hall.
- Veenman, S. (1995). Cognitive and noncognitive effects of multigrade and multi-age classes: A best-evidence synthesis. Review of Educational Research, 65(4), 319-381.
- Worthen, B. R. (1993). Critical issues that will determine the future of alternative assessment. Phi Delta Kappan, 74(6), 444-454.