MULTIAGE INSTRUCTION: AN OUTDATED STRATEGY, OR A TIMELESS BEST PRACTICE? A DELPHI STUDY

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Multiage instruction: An outdated strategy or a timeless best practice?

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The Supervisory Committee certifies that this ***disquisition*** complies with North Dakota State University's regulations and meets the accepted standards for the degree of

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ABSTRACT

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The purpose of this study was to explore the practices of multiage instruction with experts who have best practice knowledge or practitioner expertise in the multiage classroom. This investigation provided a foundation of knowledge on multiage instruction regarding strategies and challenges, the pros and cons of multiage instruction, and training and resources needed for the successful implementation of multiage instruction.

A Delphi methodology was utilized which consisted of three rounds of surveys. The population comprised two panels of experts, multiage theory experts and multiage practitioner experts, based on required criteria for each panel set. A total of 21 experts completed Round One, which consisted of 55 Likert scale statements. A total of 20 experts completed Round Two, which consisted of 31 statements/questions. A total of 20 experts completed Round Three, which consisted of 29 statements.

The panel experts in this study agreed that multiage instruction remains a credible practice today that should be recognized and supported by state boards of education. They also agreed that once oriented to the philosophy and after their child has spent time in the classroom, parents tend to be generally excited about the practice of multiage instruction. The experts further agreed that children of all abilities and needs can be successful in the multiage classroom. In terms of training

and preparation, experts agreed that parents, teachers, school boards, principals, and superintendents all should receive training on the philosophy and strategies of multiage instruction in order for it to be a successful practice. They further agreed that it is difficult to find regular training and conferences geared for elementary teachers who work in multiage settings.

In this study, panel experts identified strategies that multiage teachers use including how the room is arranged, flexible grouping, theme-based learning, collaborative learning, and peer mentoring. Through open-ended questioning, panelists also identified challenges as well as training and resource needs.

ACKNOWLEDGMENTS

My journey to pursuing my doctorate degree perhaps began in my early years of educational formation. It was then that I realized how important a teacher can be in shaping not only your academics, but also how you feel about yourself and your abilities. I experienced and witnessed the negative messages that teachers can sometimes send, and I knew that someday, I would want to be a teacher who would nurture children unconditionally and accept them just precisely and preciously as God had made them. And so it was, I was blessed with the opportunity to live my dream. I did become that teacher and later that administrator who had the wonderful opportunity to shape the minds and nurture the hearts of the many children and adults I would encounter. Along the way, I learned that God has gifted me with not only a caring soul, but the wisdom to appreciate the joy of lifelong learning. While I come to the end of this educational journey, I know that there are more courses I want to take, and much more writing left to be done. As I put the final touches on this dissertation, I am excited to put this behind me, but eager to put pen in hand and continue to write about the lessons learned in my years both as a student and as a teacher.

I want to acknowledge my husband, who showed me his love and support in subtle but important ways, by taking care of the things that needed to get done with no question or complaint. I want to thank my three children, Trevor and his wife, Karen; Brad and his wife, Karen; and my daughter Tracy. It was for them that I worked this hard and never gave up, when the days and nights were long and hard. I hoped that I might be an inspiration to them of persistence and faith, and using every bit of the gifts that God gives you to do good work in the world. In spite of my

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CHAPTER 1. INTRODUCTION

Background

In the early 1880s when formal education was emerging, only a small number of children attended school outside of the home, mostly males heading for careers in religious life. Urbanization and industrialization brought an increase in the number of schools that accepted children of all ages, both male and female (Anderson & Pavan, 1992). Education transitioned from schooling in homes and churches to the classic one-room schoolhouse, in which one teacher taught students of all ages and abilities. In 1918, 196,037 one-room schoolhouses represented approximately 70% of all public schools; however, by 1980, fewer than 1,000 of these schools remained (Muse, Smith, & Barker, 1987). According to the Country School Association of America (2011), in 2006 fewer than 400 country schools were still in operation in the United States. Anderson and Pavan (1993) observed that by the early 1900s, America had transitioned from the one-room schoolhouse to a more specialized format of instruction. Teachers now worked within graded schools that were housed in much larger school buildings, serving many more children, and taught alongside multiple teachers who specialized in a particular grade or curriculum.

The transition from one-room multiage schools to today's graded classrooms happened over time and for a variety of reasons. One influence was the influx of immigrants into the United States in the 1880s (Connell, 1987). When families arrived in America, very little was known about the children's backgrounds, languages, or education; therefore, the method used to divide them into grade levels was the birth certificate. Because the United States was primarily an agricultural

nation, the date determined for entrance to school was usually the beginning of September as it was near the end of the harvest season. When the population later became more concentrated and transportation improved, this led to larger schools that could no longer be adequately staffed by one teacher (Connell, 1987; Miller, 1989). By mid-century, the stage was set for the formal adoption of graded schools, a movement led by Horace Mann (Aina, 2001; Anderson & Pavan, 1992). Mann's visits to Prussian schools in 1843 left a strong impression, and witnessing its apparent success in Germany further fueled his advocacy of graded structure. Mann felt the operational efficiency, specialized teachers, centralized control, and modern teaching methods all had merit and could successfully be adapted in American schools (Hallion, 1994). Quincy Grammar School, established in Boston in 1848, was the first example of a graded organization design, and hundreds more would soon follow (Hallion, 1994). The graded system flourished because it required teachers to learn only the material for a single grade, not an entire curriculum. It also allowed teachers to work with larger numbers of students, and it provided an easier way to systematically approach teacher education (Anderson & Pavan, 1992; Hallion, 1994).

The difficulty of teaching in a mixed-grade classroom with a wide range of individual differences is a primary reason single-graded classrooms were established (Callahan, 1962). Dewey's work (1916/1966) at the Laboratory School of the University of Chicago confirmed that there is a wide range of "normal" social and academic differences even with children who are the same age. An intensive study of human development revealed that students differed intellectually by as many as four years within a single grade while still functioning within the normal range of

development (Dewey, 1916/1966). Olson (1952) reported that by March of the school year, the range of differences in a first grade classroom will span 4 years; 2% will be operating at the level of a 5-year old, 23% at the level of a 6-year old, 50% at the level of a 7-year old, 23% at the level of an 8-year old, and 2% at the level of a 9-year old. This information varies just slightly as reported by Connell (1987), in that by the third grade, student achievement spans will vary by three years. If, however, the development within one grade can span up to 4 years, then the range of development of 2 or 3 years could certainly present challenges for most teachers.

In contrast, the wide range of normal development might also provide a strong argument for the nongraded environment. According to Frey (2005), with the graded system, children who function within normal developmental ranges may still be vulnerable to school retention if they do not meet grade standards, and that retention would have a negative impact academically and socially. Goodlad and Anderson (1963) also surmised that retention did not improve academic performance and more importantly, was a detriment to a child's emotional development. Frey (2005) and Shepard and Smith (1990) added that some retained children may show signs of doing better in the short term; however, they will be at much greater risk for future failure or school dropout than equally performing peers who were not retained. Frey further stated that rates of retention were higher in boys, minority populations, those of lower socioeconomic status, and for children with parental factors such as lower parental IQ and involvement. A much higher percentage of these students drop out of school, making an at risk population of students even more at risk. In a comprehensive analysis of retention research, Holmes (1989) located 63 different

controlled studies that compared retained students with equally poor-achieving students who were promoted to the next grade. Fifty-four of the 63 studies showed retention had an overall negative academic and social effect on children. Students actually performed more poorly on average than if they would have been passed on and had not been retained. Children had poorer attitudes towards school, more behavior problems, and more absences from school than those who were not retained. In spite of the lack of proven effectiveness, the extra year of educating a child can cost billions of dollars nationwide, while for others it may lead to a decision to drop out of school, which was five times more likely in students who have repeated a grade (Shepard & Smith, 1990). While concerned about the negative impact of retention, Dewey (1916/1966) also argued that the graded philosophy put too much emphasis on rote memorization and did not focus on the important elements of critical thinking and a system of inquiry. Although these concerns did not suggest any one specific classroom structure, they did indicate that the graded configuration should be examined in relation to accommodating the students' wide range of normal development and the negative social impact of retention. Research studies and an examination of nongradedness thus began and would introduce decades of discussion of what was really in the best interests of children academically and socially (Gutierrez & Slavin, 1992).

In a review of the evolution of the early childhood curriculum, Williams (1999) outlined that in the early beginnings, children in the school setting were considered little "adults" and were expected to learn and behave as such. According to Williams (1999) Rousseau was one of the first to challenge that perspective and

defined play and direct interaction with the environment, not textbook instruction, as a more developmentally-appropriate approach to young children's learning. Fredrick Froebel also acknowledged play as the most appropriate medium for the instruction of young children, and he went on to prescribe manipulatives, art, music, and games rather than teacher-child dialogue, as the most relevant for early childhood students. Dewey would add a focus on cooperative learning and teaching practical life skills to the evolution of curriculum. A shift to a more rigorous academic focus began in the late 1950s. Concerns over the school performance of children living in poverty, along with the desire to match or exceed the Russians following their launching of the Sputnik satellite in 1957, resulted in more direct involvement of the federal government in early childhood practices. This was done with hopes of improving the quality of education in the United States (Connell, 1987; Cotton, 1993). In response to the perception that American schools were lagging behind in the world, curriculum would become more rigorous, moving more advanced content to lower grades. The result, wrote Connell (1987), was that many more children became school failures by the time they reached first grade. Some parents chose to avoid the risk of early failure by holding their children back for a year before they began kindergarten. The schools attempted to deal with this issue by designing programs such as junior kindergarten, senior kindergarten, or transitional first grade. Another outcome from this pushdown of academics was that some children began to be labeled as special needs, which enabled districts to apply for federal or state support to help those children who were not able to keep up with the more rigorous curriculum. The strategy was meant to

help the child, but it also carried a social stigma that for many had a negative impact on self-esteem and self-confidence (Cotton, 1993).

Government concerns about low school performance as well as Dewey's raising awareness of the drawbacks of graded classrooms were contributing factors to why nongraded classrooms became popular again in the 1950s, 1960s, and then again in the late 1980s and early 90s (Gutierrez & Slavin 1992; Pavan, 1992; Willis, 1991). Some states such as Kentucky even mandated nongraded classes at the primary level. According to Song, et al, The Kentucky Education Reform Act of 1990 was one example of a state-wide effort to address poor student performance through comprehensive changes in training and operations which included training and the establishment of non-graded primary programs. Legislation passed in Kentucky just two years later identified seven attributes that were mandatory in every primary program: "developmentally appropriate educational practices, multiage and multi-ability classrooms, continuous progress, authentic assessment, qualitative reporting methods, professional teamwork, and positive parent involvement" (Song, Spradlin, & Plucker, 2009, p. 3). Hoyt (1999) later completed a study that would measure the impact of these changes on student performance after four and then six years of implementing the Kentucky Reform Act of 1990. His findings indicated that the changes did not have a significant impact on student performance; however, some districts did have some significant decreases in dropout rates and increased students attending college. He cautioned that these results, positive and negative, could not be directly linked to the Kentucky Reform Act (KERA) alone. Low teacher salaries and

economic conditions in the state also had an impact, and change of any significance would have taken a greater period of time to accurately measure.

Multiage instruction seemed to spring up in the 1990s in other states as well. Mason and Stimson, (1996), noted that in 1992, a document titled *It's Elementary* was widely circulated in California, encouraging the implementation of multiage classes. According to Song et al. (2009), in 1994, the Michigan State Board of Education also took a stand on multiage instruction by funding non-graded programs for children, which were referred to as "continuous progress" classrooms (p.3). Within one year, the Michigan Department of Education reported that one in five school districts were operating multiage programs, and by 1998, half of the Michigan schools were engaged in multiage practices (Song et. al., 2009). In spite of the fact that children seemed to be making satisfactory progress in multiage classrooms, state funding for multiage programs ended in 1999, and a year later the Michigan Department of Education abandoned the multiage movement. Once again the nongraded philosophy lost its momentum, which was an interesting shift, since many educational experts believed that the nongraded philosophy appeared to be the most promising way to meet every child's needs (Yarborough & Johnson, 2000). There remained a strong movement, however, involving child development specialists, psychologists, researchers, educators, legislators, and others calling for a more developmentally-orientated curriculum which included nongraded learning arrangements for primary children (Miller, 1989).

Many studies have been conducted since the 1960s on graded versus nongraded schools, and single-grade versus multiage instruction. While these studies

have produced mixed results regarding outcomes for children, there have seemed to be consistent concerns expressed in these studies including parent and community lack of understanding of the program, the lack of training of multiage teachers, the teachers' attitudes, a lack of textbook resources for multiage instruction, the fear of more preparation time, and the need for more materials (Aina, 2001; Davis, 1992). These factors could have an impact on the outcomes of studies done on multiage instruction, and therefore should be explored in order to minimize the limitations of future multiage studies. Since the nongraded system has proven to be a viable option which continues to exist today, the impact of multiage instruction should truly be measured with accuracy by exploring the strategies, addressing the many challenges, and closely examining the various concerns expressed by those who have utilized this practice, particularly the lack of training, resources, and support.

Statement of the Problem

Small, large, rural, and urban schools all struggle to keep up with the latest trends and developmentally-appropriate practices in education. According to Gutierrez & Slavin (1992), multiage instruction is one strategy that has allowed a school to operate more efficiently in staffing when class sizes cannot support one teacher (or two teachers) per grade. Furthermore, multiage instruction is a practice not impacted by fluctuating enrollment. For example, in schools with a moderately large class size of second and third graders, to be efficient in staffing, administrators might create one second-grade class, one third-grade class, and one combination class of second and third graders, rather than two sections of each class. In a graded structure, teaching the second- and third-grade combination class would be difficult, as with the

combination model, the two portions of the class are taught separately. In a multiage system, the various ages are perceived and taught as one class, and therefore the highs and lows of enrollment have less impact on instruction as students would be consistently blended by ages (Gutierrez & Slavin, 1992).

In Canada, Europe, and some parts of Asia, multiage instruction is a more common model, due in part because it is an economical way to educate students in less populated areas or areas with fluctuating enrollment; however, the model is also utilized due to its proven impact on children's performance (Pardini, 2005). Although some studies indicate there is no significant difference or disadvantage to children being taught in a multiage classroom (Gutierrez, & Slavin, 1992; Pavan, 1993; Veenman, 1995), other research studies substantiate that children in multiage classrooms do as well as or better academically than children in graded classrooms (Aina, 2001; Chapman, 1995; Goodlad & Anderson, 1987; Hull, 1958). Proven positive outcomes for children and the economic efficiency of operation, as in Canada, Europe and Asia, have led many schools and states also to consider a transition to multiage instruction.

Even while credible research studies have supported positive social and academic outcomes for students, studies by Chace (1961), Davis (1992), and Hallion (1994), have also identified a lack of administrative and parental support, a lack of planning time, problematic teacher attitudes, and a lack of staff training on multiage instruction as major obstacles to successful implementation of the nongraded classroom. In addition, Gaustad (1992a) acknowledged that there are disadvantages to implementing the non-graded model. According to Abbie Robinson-Armstrong, the

former director of the Kentucky Department of Education's Division of Early Childhood where nongraded classrooms were mandated statewide, multiage instruction does require additional supplemental resource materials which can be a financial burden to already struggling districts (Gaustad, 1992a). Furthermore, teachers require initial and ongoing multiage training regarding child development, integrating curriculum and instructional strategies, which Miller (1989) called "critically important" for teacher and student success. Miller (1989) suggested that training should also include opportunities to observe effective multiage models in action. The lack of a multiage training sites and suitable labs or accredited multiage schools available for observation, have consistently been a barrier in being able to effectively establish and measure outcomes for the multiage model. True multiage programs have also proven difficult to measure because teachers tend to teach to all grades, due to a lack of understanding of the theory of nongradedness and inadequate staff development (Pardini, 2005; Slavin, 1987). Unless teachers have proper training in instruction and are given the time, support, and resources to implement the multiage model, its effectiveness may never be truly quantified. As a result of these expressed concerns, exploring the area of strategies, training, and resources became key elements of this study.

Purpose of the Study

The research studies on nongraded, multi-graded, and ungraded grouping have supported the viability of this organizational concept (Anderson & Pavan, 1992). It seems unnecessary, therefore, to substantiate the credibility of the practice. Degree of implementation of nongradedness, however, is believed to be an important factor

influencing student performance. Very few studies have attempted to assess the degree to which the strategies of multiage instruction were actually followed (Anderson & Pavan, 1992). It may be useful therefore, to clarify the strategies, training and support needed to implement a successful multiage classroom for those who choose this option. Research studies point to the need for extensive staff, parent, and community training when school systems choose to implement multiage instruction (Chace, 1961; Davis, 1992; Hallion, 1994). In addition, studies also refer to the many challenges involved in making such a complex transition. Therefore, the purpose of this Delphi study were as follows:

1. to identify the unique teaching strategies used in a multiage classroom;
2. to identify pros and cons for children enrolled in multiage instruction;
3. to identify the preparation necessary for teachers, parents, and the administration to successfully implement the concept of multiage instruction;
4. to identify the resources and training needed to maintain successful multiage instruction practices; and
5. to identify the challenges to implementing multiage instruction.

The findings from this study may serve as a guide for programs establishing or making the transition to nongraded systems. In addition, future research studies on multiage instruction which attempt to measure outcomes for children might ensure that programs are truly utilizing the strategies appropriate to multiage practice, which would add significantly to the credibility of these studies.

Research Questions

RQ 1: What are the common practices and strategies used in a multiage classroom?

RQ 2: What are the pros and cons for children enrolled in a multiage classroom?

RQ 3: What training and resources are necessary to implement and support multiage instruction?

RQ 4: What are some of the challenges to implementing multiage instruction?

Definition of Terms

The following terms were defined in order to assist the reader in understanding the concept of multiage or nongraded instruction.

At risk: A term commonly applied to those students who are experiencing difficulty with academic achievement and are at risk of failing the promotional standards of their grade level.

Authentic Assessment: This type of assessment occurs by sampling children's work while they are engaged in the context of normal classroom activities. The collection of their work can be assembled through the use of portfolios, journals, observations, taped readings, videotaping, and conferencing. In authentic assessment, a teacher's professional judgment may be required to evaluate the level of performance (Davis, 1992).

Combination Classroom: Combining two or more grades but functioning like a graded classroom in which separate curricula are taught to each grade (Gayfer, 1991).

Combination classrooms typically occur because of enrollment imbalances, not philosophical considerations.

Continuous Progress: This refers to a student's unique progression through the primary program at his or her own rate without being compared with others. Retention, promotion, and assigned letter grades are incompatible with this approach. The curriculum and expectations for student performance in a continuous progress program are not linked to the child's age or number of years in school (Goodlad, 1984).

Cooperative Learning: An instructional method in which students work together in a group small enough for each student to participate in a clearly assigned collective task. While student have a responsibility for their individual learning they also contribute to the success of their group (Davis, 1992).

Delphi Study. The Delphi study process provides an interactive written communication structure between researcher(s) and experts in the field in order to develop themes, needs, predictions, or forecasts about a topic. The Delphi study process was developed in order to make decisions between experts possible without permitting a certain social interactive behavior to occur, which can hamper expert opinion sharing (Skulmoski, Hartman, & Krahn).

Developmentally Appropriate Practice: The tailoring of educational practices and curriculum components to coincide with and foster what is thought to be individually, developmentally, and culturally appropriate for students at a given point in time (Davis, 1992).

Family Grouping: A group of students who stay with the same classmates and teachers for more than one year. Family groupings often contain siblings in the same class (Lloyd, 1999).

Flexible Grouping. A term commonly given to the practice of varying grouping strategies for instruction. Throughout the day, students in multiage settings work in a variety of flexible group configurations such as small groups, partners, individually, or in the whole group. The groupings are fluid and flexible and are chosen to meet the needs of students in multiage classrooms (Chapman, 1995).

Graded classroom: A classroom in which students are grouped by chronological age, progressing through each grade upon meeting its identified expectations (Anderson & Pavan, 1992).

Heterogeneous Grouping: The grouping of children based on their differences, such as age, sex, and achievement (Davis, 1992).

Homogeneous Grouping: A grouping of students based on their similarities such as chronological age, reading ability, and test scores (Davis, 1992).

Horizontal Grouping: Children classified into classes based on their chronological age, such as 5-year olds in kindergarten, 6-year olds in first grade, and 7-year olds in second grade (Lloyd, 1999).

Multiage: Used synonymously with the term *nongraded*, this refers to a deliberate classroom organization pattern that does not use grade level designations for students. A span of two to four years among students is represented in multiage classrooms. Multiage grouping is a flexible system in which students are working cooperatively across age levels (Lloyd, 1999).

Multi-graded: Classes with a combination of three or more grade levels are formed out of necessity due to fluctuating enrollments or as a cost-saving measure. Teachers in multi-graded classrooms teach the individual class curriculums separately and do not use a multiage approach to instruction. Multiage and multi-graded classrooms are not synonymous (Lloyd, 1999).

Nongraded: The term nongraded is used synonymously with the term *multiage*. Grade level designations are entirely removed, and students are placed in flexible groups according to performance level rather than age. Students move from group to group and complete the curriculum at their own pace and ability level (Anderson & Pavan, 1992; Gutierrez & Slavin, 1992).

Open education: An arrangement popularized in the 1970s when large numbers of children were team taught in spaces that could be partitioned or opened up as necessary (Lloyd, 1999).

Team teaching: An organizational plan enabling two or more teachers to collaborate in planning, organizing, teaching, and evaluating instructional groups within a larger group.

Tracking: A practice whereby students are ability grouped and assigned to classes that vary by rate of instruction and content of instruction (Davis, 1992).

Traditional Classroom: A classroom with students grouped by chronological age with one teacher for all subjects except for special teachers such as art, music, and physical education. This term is synonymous with the *graded classroom*.

Significance of the Study

In order for school systems to make the best decisions about appropriate instructional practices for students, those decisions need to be based on data drawn from sound research studies. Over the years, studies conducted on the impact of multiage practices on social and academic development have produced varied results (Pavan, 1992). Studies have also consistently identified a lack of training and support for multiage teachers, and a failure to transition to multiage instruction due to a lack of knowledge regarding ongoing issues related to implementation (Slavin, 1987). If the impact of multiage instruction is truly to be studied accurately, then it is important that those who implement this practice be properly prepared. Furthermore, for those interested in establishing this type of school environment or making the transition to a nongraded environment, it would be beneficial to identify the necessary resources and strategies needed, as well as to identify the challenges that need to be addressed.

Limitations of the Study

One limitation of this study is that the results are restricted to the panel of experts and are not generalizable to the entire population of teachers. Another limitation is panelist bias, particularly with the practitioner experts, as they may be prone to reflect positive outcomes for the multiage model in which they have taught. This bias may be minimal, however, as 90% of the practitioner experts (nine out of 10) also taught in graded classrooms. Yet another limitation of the study is that when asked about the pros and cons of the multiage experience on students, panelists generally reported only positive outcomes in their reflections. It is possible that the questions posed did not adequately present the opportunity to identify the negative

outcomes for students, teachers, or schools, or that additional probing should have continued in Round Two in attempt to draw out more comments in that field.

Organization of the Remaining Chapters

Chapter one addresses the need for a study to understand what preparation would be beneficial to teachers in nongraded environments in order for staff and administration to have a full understanding of multiage teaching strategies and to successfully implement and maintain those practices.

Chapter two reviews the literature on the history of multiage instruction, the rationale for multiage instruction, and benefits of the practice. This chapter also includes a summary of research studies on the graded versus nongraded environment, reflecting both positive and negative outcomes. Finally, Chapter two covers the concerns and challenges of the practice and suggested strategies for those schools that are engaged in implementing this format.

Chapter three comprises a detailed accounting of the Delphi method and procedures that were used to address and answer the research questions. Chapter four consists of the demographic data on the participating panelists and the findings, including the mean, standard deviation, and the percentage of agreement or disagreement to each of the survey statements. The fifth chapter is a discussion of research questions, a model of the significant findings, and suggestions for future research.

CHAPTER 2. LITERATURE REVIEW

Chapter two provides a broad understanding of the concept of multiage instruction. Major headings and subject areas addressed include (a) the history of multiage instruction and definitions of multiage practices, (b) the rationale for multiage instruction, (c) multiage instruction strategies and practices, (d) multiage instructional benefits, (e) research outcomes, (f) challenges of multiage instruction, and (g) transitions to multiage instruction. The literature review offers a justification for staff training and development, and the need to develop a guide for programs interested in making the transition but who may be overwhelmed with the uncertainty of how to make the change.

History of Multiage Instruction and Defining Multiage Practices

Nongraded Education

Connell (1987) provided a description of Britain's post-war creation of family groupings in educational settings. During World War II, in order to protect the young children from harm, parents sent their children away to safer communities less likely to be bombed. When the war ended and children returned home, to minimize the children's emotional trauma British educators redesigned primary schools creating new social patterns called "family groupings." Children were grouped into more natural family groupings of three-year blocks, allowing the students to stay with the same teacher for multiple years, creating trust and stability in the school environment. It was common to see siblings together in the same group, which provided security for the family. When older children showed signs of readiness, they would move on,

and younger children would rotate into the "family," while the more seasoned students in the classroom became the new leaders and mentors.

These post World War II British primary schools strongly resembled America's early one-room schoolhouses of the nineteenth century. The one-room nongraded schools offered certain features that would today be considered educationally sound and consistent with current research such as a stable, consistent environment in which children remained with one teacher and many of their classmates for more than one year (Connell, 1987). They comprised a heterogeneous mix of ages and abilities providing for greater social interaction, shared responsibility, and no limitations on what was taught or learned (Aina, 2001). Gutierrez and Slavin (1992) stated that a key element of the nongraded classrooms of both yesterday and today is the removal of the identity of grade designations. Rather than being grouped by ages, children in multiage classrooms are grouped with other students similar in their level of academic performance. Multiage students then proceed through the classrooms at their own rate, with no set time for when they move on. Because a multiage school has classrooms at many different levels, students can work and move on at the pace that is natural and comfortable for them. As a result, children are never retained or held back. When they are ready they advance to the next level. Nongrading can be used with all ages, but the natural progression of learning that is characteristic of this model, is particularly appropriate during the primary years (Gaustad, 1992a).

The concepts of multiage education are grounded in the philosophy of progressive education (Morrison, 2006). Progressive education, sparked by Dewey

(1916/1966), emphasized child-centered planning and teaching. The progressive movement focused on students and their interests, rather than on discrete subjects; it viewed education as a process of living, rather than preparation for future living. Progressive education practices today include inquiry-based learning, portfolio-based assessment, multiage grouping, and flexible scheduling (Morrison, 2006).

Goodlad and Anderson (1963) have described how teachers in early nongraded schools would design a system of continuous progress by organizing the skills to be learned in each grade and subject in "hierarchical" fashion. In this model students would progress at their own pace, and in the fall would simply continue on from where they left off in the spring. Starting in the late 1960s the nongraded plan integrated the practice of individualized instruction, which would typically include the utilization of learning stations, individualized activity packets, and other student self-directed projects. Soon after, the concept of team teaching emerged as another strategy of the non-graded environment. In this model, multiple teachers would be housed in a section of the school, assigned to a large group of children. Teachers would work together grouping and regrouping the children throughout the day, designing lessons that were specifically geared for the needs of that group. There was a period of time during which school buildings were constructed with this concept in mind, and they would later be referred to as open schools, rather than nongraded schools.

Graded Education

The graded school system was largely a response to a need for managing large numbers of students, and it was not designed with the individual needs of

children in mind (Goodlad & Anderson, 1963). Although the graded school developed because of demographics and economics, not because of best practice for children, it has become the predominant mode of operation today (Goodlad & Anderson, 1963). In contrast to the nongraded classroom, graded education is the practice of grouping children by chronological age.

Endorsed in the United States by educator Horace Mann, the graded system according to Hallion (1994), was created to provide an education for the booming growth of the United States caused by the flood of immigrants into schools. In 1843, Horace Mann, Secretary of the Massachusetts Board of Education, visited Prussia and returned to the states convinced that the one-room schoolhouse was an inefficient system of operation. Mann liked what he saw in the German schools where teachers received specialized training, and there was centralized order and control. The rise of the use of the McGuffey reader textbooks published in 1836, which were graded and illustrated through six grade levels, was yet another significant milestone which seemed to pave the way towards a graded school system. Twelve years later, in 1848, Quincy Grammar School opened its doors in Boston, Massachusetts; it was the first graded grammar school in the United States (Hallion, 1994). By 1860, graded schools had become the standard throughout the nation, looking very much as they do today (Hallion, 1994).

Graded education has assumed that children who are the same chronological age are intellectually aligned (Aina, 2001). In the graded systems setting, children progress through the system based on a predetermined set of standards for each age and grade. At the end of each year, children are graded on their achievement, then

promoted or retained based on meeting identified standards. Letter or numerical grades are assigned to assess achievement as well as to motivate future learning (Aina, 2001). Stone (2010) described today's graded system as using a curriculum-centered model, which mirrors the assembly line in the manufacturing model. In this model there is a predetermined sequence of work for each grade level, similar to the steps and hierarchy of tasks in manufacturing. Grade level expectations are determined by a set of identified "standards," which must be met before a child can move on the conveyer belt to the next level, which leaves little room for honoring each child's unique rate of development, personality, or intelligences.

Probably the best-known critic of the graded system and an early pioneer of the push to return to multiage instruction was John Dewey, who is known as the "father of progressive education." He felt that schools had become too "machine like," that children learned best when engaged in active, hands-on learning, and that evaluation should be based on the child's ability to problem solve, not just on rote memorization and feedback (Hallion, 1994). Dewey's philosophy of honoring the individuality of each learner, and his concern about the impact of retention, would lead to decades of debate on the developmental appropriateness of the graded system.

Nongraded Versus Graded Practices Today

While the nongraded schools and the one-room schoolhouse of the past may not have been established based on research or best practice (Goodlad, & Anderson, 1963), the basic principles appeared to be fundamentally sound. Many years later, educators would revisit these strategies. In the 1990s, educators and citizens began to reevaluate their schools and propose reforms to meet the needs of diverse social and

economic groups. As a result, the Kentucky Education Reform Act of 1990, and the Oregon Educational Act for the 21st Century made nongraded primary education a key element of their reform (Gaustad, 1992a). Multiage classes continued to operate in every state and in public, private, and charter schools (Stone, 2004). As recently as 1995, more than half of the schools in the Netherlands, Finland, Portugal, Western Australia and one in seven school systems in Canada were using multiage groupings (Veenman, 1995, as cited in Song et al., 2009). Stone (2004) would add that International schools in Japan and Italy have now designed entire schools founded on the nongraded model. Furthermore, in 2004, the Netherland Antilles federal government would also acknowledge the credibility of the multiage system by mandating a complete change in their nation's schools from the traditional graded system to the more child-centered instructional strategies found in a multiage classroom. New Zealand and Australia have historically offered mixed age learning and this practice continues there today. Multiage education is also prevalent in Europe and parts of Asia, and while some of that interest may be philosophically driven, in some areas it is also because it is an economic way to deliver education in rural communities (Pardini, 2005).

Rationale for the Use of Multiage Instruction

As presented in Aina's (2001) article, the literacy rate in the world is highest in New Zealand, where multiage instruction is a common practice and mastery of skills rather than chronological age has determined when a child moves on (Kasten & Clarke, 1993). The basic theory or rationale behind the multiage classrooms as proposed by Hamilton and Rehwoldt (1957) is as follows:

> . . .we learn from those who are different from us as well as those who are similar to us. We learn a foreign language more readily by associating with those who speak the language. We gain maturity partly by living with those who are more mature than we, or by having responsibilities for those who are less mature than we. (p. 28)

Peggy Lippitt (1969) wrote:

> . . . If you need a rationale for cross-age helping, certainly all children need more individual help than a teacher can possibly provide by himself. Furthermore, older children, because they are children, offer resources adults cannot provide as well. They are closer in age and can often reach a child who is having difficulty, when an adult cannot. (p. 10)

A review of the literature on the rationale for multiage instruction revealed a number of perspectives on why some may support the practice. Over the years, educators familiar with multiage instruction have acknowledged that multiage grouping allows them to develop a more developmentally-appropriate program which supports children's developing at their own pace in surroundings that more similarly mirror natural life experiences (Miller, 1994). The National Association for the Education of Young Children (NAEYC) (2003) affirmed this principle in a position statement that described developmentally-appropriate practices for children 5–8. This document indicated that children should be perceived as individuals with their own unique timing of growth and development who function best in an environment in which they are both challenged and mentored by others. Katz, Evangelou, and Hartman (1991) made a case for multiage practice by downplaying grouping by

ability or performance level and emphasizing the value of a natural community of learners. The multiage concept is based on the assumption that children learn best in active ways through interaction with the environment and in a natural setting that offers variation in student abilities (Aina, 2001).

The rationale for multiage instruction (drawn from the work of Calkins, 1992; Davis, 1992; Elkind, 1989; Hunter, 1992; Milburn, 1981; Purdom, 1992) includes the following components:

1. Chronological age and mental age do not always correspond,
2. Children are able to work at different levels without remediation, thus avoiding the social or emotional damage caused by retention,
3. Students stay with their teacher(s) for more than one year; thus teachers know their students well, and children avoid the trauma of transition each year,
4. Age and achievement differences are accepted as the norm by children,
5. Nongraded grouping lends itself to integrated use of validated practices such as cooperative learning and cross-age tutoring, and
6. The team teaching and family-like atmosphere typical of nongraded programs leads to increased job satisfaction for teachers.

Proponents of multiage practices also note that nongraded programming is more in keeping with the way children in naturalistic settings spontaneously group themselves for play and projects. Common findings among researchers have suggested that children will have more success with play partners and friends who are younger and older than they do with peers in their same age range (Day & Hunt,

1975; Pratt, 1986). While variation in ages is perceived as a positive experience for children the separation of same age peers, which occurs when students are labeled as "below grade level," leads to feelings of inadequacy and not fitting in (Stone, 2004). In addition, Cuban (1989) stated that the labeling of students in the graded structure, when they are removed for separate classes and programs, may unintentionally add to the social disadvantages already experienced by children experiencing poverty and racism. In contrast, the multiage setting accommodates the variation in development and eliminates the need for labels.

As schools attempt to become fiscally sound, some school districts may perceive the nongraded plan as a more efficient way to operate in schools. Multiage instruction has eliminated the designation of children to a certain grade so that peaks and dips in enrollment do not require an evaluation of staffing patterns each year (Gutierrez & Slavin, 1992). Administrators and teachers can create manageable class sizes while finding the best fit for each child and his or her ability level.

The major rationale for a nongraded approach as identified by Guitierrez & Slavin (1992) is to provide a more suitable alternative to the negative impact of retention or the social promotion of children who will likely struggle to achieve the expectations of their next grade assignment. Retention fails to consider variation in normal rates of development, (Frey, 2005) and unjustly subjects children to another year of repeating the same content. Multiple studies on retention have substantiated that children are negatively affected both academically and emotionally by that experience. In *Flunking Grades: Research and Policies on Retention,* Shepard and Smith (1989) reported that retained children on average actually perform more poorly

when they go on to the next grade than if they had been promoted and not retained. High school dropouts are five times more likely to have repeated a grade than are high school graduates. Shepard and Smith (1990) further reported that at the time of their published study, the annual cost to school districts of retaining 2.4 million children each year was nearly $10 billion. Both economically and in the best interests of children, efforts to improve student learning should focus on children's strengths and not their problems. Teachers must work together to support children as capable and valuable contributors to a classroom community (Martin, 1988).

According to Gutierrez and Slavin (1992), there was a rapid increase in retention in the 1980s, which was fueled by the political accountability pressures of that time. As a result, the nongraded primary school was re-established as a more developmentally-appropriate model, and an alternative to retention and the social problems that accompanied that practice. Mounting evidence indicates that nongraded primary education would provide an opportunity for children to succeed rather than fail. It would also increase cooperation and reduce conflict among staff and parents because its practices required a strong connection between staff and family. Finally, it would increase the level of community support within the schools because team teaching was the ideal model for multiage instruction (Davis, 1992).

Strategies of Multiage Instruction

In traditional graded systems, curriculum planning is often based on the assumption that everyone learns at approximately the same rate, whereas multiage instruction does not promote the image of homogeneity. In the multiage classroom, some of the basic assumptions include the following:

1. children grow in similar stages but at different rates and in different styles,
2. children construct their own knowledge in a classroom environment that is organized but flexible,
3. the way that children feel about themselves impacts their ability to learn, and
4. learning is a process that depends on social interaction. (Aina, 2001; Bredekamp, 1987)

It is from these assumptions that the principle strategies for multiage instruction evolved.

According to Cade, Conner, Stuart and Zweifel (2006), multiage education traced its philosophical roots to the guiding principles of early childhood education, in which the emphasis was placed on the interests and the ability of each child rather than a central focus on the curriculum. Multiage classrooms are created when children of different ages and grade levels are intentionally combined not for economic purposes, but exclusively for the social and academic benefits of children. Multiage classes, according to Pardini (2005), typically have included at least a three–year age span or a two–year grade span. Students in a multiage classroom remain with the same teacher or a team of teachers for more than a year, typically moving on when they have mastered the skills to transition to another environment. Having a child for multiple years has enabled a teacher to use the knowledge she or he has gained about a child in the first year to plan learning activities and strategies for the second year with that child (Elkind, 1989).

There is an identifiable physical difference between the setup of the nongraded and the graded classroom (Gaustad, 1992a). Instead of rows of desks permanently facing one direction, tables and chairs are used for small group instruction and learning centers. The room arrangement allows for unique strategies implemented by the classroom teacher. Flexible grouping is one key strategy. Students may be grouped homogeneously by achievement for some subjects such as reading and math, and heterogeneously for some subjects such as art, social studies, and science. In heterogeneous settings, children contribute to group projects according to their skill level, and materials are geared toward hands-on learning (Gaustad, 1992a).

Peer learning, which takes place in structured, purposefully planned instruction, as well as in less-structured situations that occur every day, was identified by Hoffman (2002) as another key strategy. Frequent instructional opportunities for peer learning are planned, and students often work in small groups that are either teacher or student-led. Teachers understand the important role that social interaction and collaboration play in the multiage classroom. Stegelin, (1997) defines the diversity of learners in the collaborative peer groups and the problem solving that takes place within those groups, as critical key elements of a quality multiage setting.

As Carter (2005) described, working with a group of students whose ages span three years may not differ greatly from working with a group of same-age students because students with the same chronological age are seldom in the same developmental place. Students will have to be grouped at some time for different interests and different needs. In order to build a sense of community, students will

begin and end their day in a whole group experience. Children are put into heterogeneous groups when the teacher wants the older students to model concepts and to support the less capable students. When a teacher wants to introduce or to expand skills in reading, spelling, or math, he or she works with small homogeneous groups, while other students work independently on various assignments. Struggling students may ask for help from other students if they need it. The teachers monitor student interaction to make sure that it is positive in nature and that one student does not assume primary responsibility for taking on the role of "teacher" (Hoffman, 2002). Flexible grouping and regular peer support can help build interdependence and strengthen community spirit (Carter, 2005).

In the multiage classroom, individuality is valued, and children can comfortably work at their own pace. Labels or groups do not define the more or less capable students, and cooperation rather than competition is the desired outcome. Due to the wide range of abilities, different expectations are naturally set for everyone. Since children and teachers spend multiple years together there is a greater chance for the teacher to get to know the academic, social, emotional and physical strengths of each student in order to support and for that partnership with parents to take root (Stone, 2004). Children who are in their second or third year in the classroom are the peer mentors to the learning community; they are the ones who have mastered and can model the classroom routines, and can help to orient the newcomers to the operation of their new learning environment (Hoffman, 2002).

In multiage instruction, a focus on individual differences is the practice. Teachers in multiage classrooms would be much more likely to use small groups in

their teaching practices and to form and reform these groups on a regular basis depending on interest and ability (Blount, 1995). The use of flexible small group instruction is crucial to the success of multiage systems, and therefore if nongraded classrooms are taught in a fashion similar to whole-group graded settings, children may be better off in a traditional graded classroom (Aina, 2001). To plan small group curriculum for the varied ages and abilities of children in the multiage classroom, teachers start by looking at the scope and sequence for the subjects for all grades. Then they identify the topics that are similar and address these topics by customizing activities to as many learning styles as possible (Aina, 2001). Another common multiage strategy is teaming with another teacher (Miller, 1994). Team teaching can prove to be useful in difficult moments because it can bring support, humor, problem-solving capabilities, and reflection into teachers' lives (Carter, 2005). A team approach allows for one teacher to instruct while another observes and supports, or for teachers to work with two small groups simultaneously (Cady, Connor, Stuart, & Zweifel, 2006). Finally, Stone (1996) suggested that strategies for successful multiage programs also include providing adequate planning time, practical training, and an on-going communication plan.

Pavan (1992), principal of one of the earliest model nongraded elementary schools, has continued to advocate for the nongraded school model. Pavan's (1972) dissertation presented a summary of the goals and elements of a fully-realized nongraded environment, which was later adapted by Goodlad and Anderson (1993). Pavan's key elements of a nongraded school are summarized and outlined in Appendix A.

Benefits of Multiage Instruction

Multiage grouping, according to Katz, (1995) is based on the assumption that the differences present when mixing multiple ages of children has the potential for academic and social benefits for the students enrolled . While single graded classrooms tend to create a common set of expectations for all children enrolled, (Katz, 1995), children in multiage settings are permitted to perform with different built in timetables, which can greatly reduce the stress and pressures of academic failure (Aina, 2001; Kruglik, 1993). Furthermore, the wider the age span that comprises a classroom, the greater the tendency for students and teachers to embrace the wide variety of differences that are present (Katz, 1995). Hallion, (1994) would add that an environment which promotes teamwork and cooperation, key elements of the multiage classroom, will significantly reduce behavior problems. Older children mentoring and guiding younger children can also free up time for the teacher to attend to those in the classroom with the greatest needs. Therefore, those who benefit most are often the children who simply need more time to master a concept, or those who require a variety of ways for learning to take place. Continuity with one teacher year-after-year will provide that insight and the gift of time. Since teachers in multiage settings are required to teach the same class for two or three years, they become familiar with students and their families, potentially resulting in a strong sense of continuity and community. Such a connection could lead to better teacher-parent relationships and increased parent involvement (Miller, 1994). Research has also shown that because of that continuity with the same teacher, on the first day of

school, teachers and students in a multiage setting felt calmer and more comfortable and relaxed than those in single-age classrooms (Fu, 1999).

Song et al. (2009) suggest that perhaps the greatest advantage of the multiage classroom is allowing children to work at their own pace, which builds confidence for them to reach their full potential. The current practice of aligning grade based standards and curriculum-centered instruction while working with a diverse group of learners, will surely miss the mark with at least one group of students, often the high or the low end learners. With multiage strategies and differentiated instruction, the teacher targets the progress of each student rather than racing to cover the content from each selected textbook. It has also been shown that such a caring, individualized environment improved student attitudes toward school and schoolwork, decreased discipline problems, increased attendance, and improved peer relations (Veenman, 1995). In addition, multiage classrooms have proven to be successful in schools with concentrations of high poverty populations, where a caring community may positively impact students who encounter trouble outside of school (Carter, 2005; Mellinger, 2005).

As cited in Aina (2001), according to Maeda (1994), there is evidence that shows that the multiage classroom can have the following positive outcomes for children:

1. Optimal learning occurs in nurturing environments that foster self–esteem, risk taking and decision making;
2. Instruction and activities are considerate of individual differences and learning styles;

3. Learning is holistic, with attention to the social, emotional and intellectual development of the child;
4. Children construct their own knowledge; and
5. Children learn best when they interact with people and their environment.

Finally, the nongraded system eliminates the decisions to promote or retain and has proven effective for children of all ability levels, including special needs students, emotionally-troubled students, minorities, and both boys and girls (Hallion, 1994). Eliminating the fear of failure and retention will enhance the opportunity for all children to develop an authentic love of self, for learning, and for school. Multiage instruction has the best impact at the K-1 level, but it would be ideal for academic achievement and self-esteem if multiage instruction were provided throughout students' elementary school years (Elkind, 1989).

Research on Multiage Instruction

Hull (1958) reported that one of the first studies of a multiage program began in 1955 in Torrance, California, and was conducted for a period of three years. Seven classes were assembled with approximately 33 children in each. There were four primary multiage classes (first, second and third) and three intermediate classes (fourth, fifth, and sixth) involved in the study, and teachers for the study were chosen randomly. Test results in the Torrance study indicated that in the three skill subjects scored in the experiment—reading, arithmetic, and language—multi-grade learning clearly exceeded single-grade learning as measured by standardized tests in those areas. In addition, the study also showed that multi-grade students showed greater

gains in personal adjustment, social adjustment, social maturity, behavior characteristics, and attitude towards their peers than did single-grade students.

Carbone (1961) found graded instruction outcomes to be more favorable than in the nongraded classroom. In his study, he matched and compared two graded and two nongraded school systems, one each of high- and low socio-economic levels. In each school, a fourth-, fifth- and sixth-grade class was randomly selected to participate in the study. The sample consisted of 122 nongraded pupils and 122 graded pupils with a close match in each classroom for age and gender. Carbone found that graded pupils scored significantly higher on the Iowa Tests of Basic Skills in all academic areas. Furthermore, in his study the graded pupils scored higher in social participation, which was the only mental health area in which the groups differed significantly. The study by Carbone is not an indictment against the nongraded school, but the study does indicate that a change in school organization itself will not automatically produce higher academic achievement. Any new form of school organization can perhaps produce benefits if it is accompanied by appropriate instructional practices by the teachers.

One hundred fourth graders grouped homogeneously for math, language arts, and reading were studied by Koontz (1961). The groupings of the experimental classes were compared using the scores on the Iowa Tests of Basic Skills. Koontz found that the homogeneous groups made less progress than the heterogeneously-grouped pupils, concluding that the nongraded classrooms where heterogeneous groupings are common, daily practice produced better outcomes for children.

Many studies have been done on multiage practices, and the least controversial outcomes have indicated that there is no evidence of any disadvantage to a child who is a member of a multiage class (Way, 1981). According to Pavan (1992), however, in 64 research studies published between 1968 and 1990, 58% of the children in nongraded schools did perform better than graded students, 33% did as well as graded students academically, and 9% of the studies indicated the nongraded students scored lower academically than those in graded classrooms. Goodlad and Anderson (1987) along with Miller (1994) found that when comparing academic achievement tests of graded and non-graded students, children in the multiage classrooms did the same or slightly better than students in graded classrooms. Although more recent research is lacking to substantiate significant academic achievement gains in multiage classrooms, evidence has suggested that children in multiage classrooms achieved a higher cognitive developmental level at a faster rate than those in classrooms of same-age peers (Frosco, Schlesser, & Andal, 2004). Furthermore, Anderson and Pavan (1993) reported that children in non-graded classrooms seemed to be slightly more advanced socially and emotionally, and have a more positive attitude towards school. In a study of the social behaviors of toddlers and preschoolers in a same age versus multiage groupings, Logue's (2006) research found that aggressive behaviors such as kicking, hitting, biting, and taking toys were less prevalent in the multiage setting. In addition, students in multiage programs had higher language development, due to the higher rates of language exchange among mixed-age children. In a study of children's friendships, Pratt (1986) reported that there was more aggression and competition in same age groups, and in the multiage

classroom, more harmony and nurturance. Mason and Burns (1996) argued, however, that because multiage classes usually had higher achievers and more experienced teachers, instruction in multiage classes might actually be less effective.

Pavan's (1992) longitudinal data revealed that the longer students are in nongraded programs, the more positive their school attitudes and academic performance. Lloyd (1999) noted that in seven longitudinal studies comparing students who spent their entire elementary school years in the same nongraded school versus those who spent their time in a traditional setting, all reported superior academic performance. In addition, students felt more positive on mental health issues and presented fewer discipline problems in junior high school compared with those who were schooled in the graded model. Many studies, however, have also reported the difficulties of making comparisons when little was known about what teaching strategies were utilized in the actual classroom. As a result, the limitations or results of any study measuring the effectiveness of the nongraded classroom may simply be due to other factors such as lack of teacher preparation for the ungraded school, lack of materials to provide for the varying interests and abilities of students, the continued use of traditional graded practices, insensitivity to the needs of individual students, or any combination of these conditions.

Challenges, Disadvantages, and Obstacles

In spite of the promise of positive outcomes for students in the nongraded structure, according to Pardini (2005), multiage programs across the United States are being discontinued in some areas, and in other areas administrators have declined to take on the challenge to begin new ones. Even in the state of Kentucky where the

1990 Education Reform Act transformed all primary schools to nongraded environments, the scope of its multiage initiative has reduced by one half. There are education specialists who trace the decline in multiage programs to the *No Child Left Behind* law which has emphasized standardized, grade-level testing and deemphasized the affective side of children's education (Pardini, 2005). Other professionals conclude that it has fallen by the wayside due to a lack of multiage training opportunities and the perception of more work for the classroom teacher. Embedded within many research studies and numerous published articles, however, there is evidence of the many challenges teachers and administrators face in implementing the multiage, nongraded philosophy that may also contribute to the declining numbers.

According to Yarborough and Johnson (2000), one of the biggest issues impeding a more rapid movement to multiage instruction was the battle with traditional graded classrooms. Teaching to and assessing children based on the standards has become a revered and acceptable practice. Parents have tended to perceive schools in terms of what they knew themselves as children, and they have viewed the removal of grade designations as a removal of standards. According to Song et al., (2009), grouping multiple ages of children has created concern for some parents about the appropriate instruction for each child. While parents of older children worry that their children will be held back by the younger students, parents of the younger children fear that children may be presented with curriculum content too challenging for them, which may ultimately impact their self confidence. Since nongraded classrooms are not widely available for visitation it is hard for parents and

staff to imagine the management of such a wide range of abilities. This leaves those in decision-making positions reluctant to battle the concerns of parents and professionals and therefore many choose to maintain the typical non-controversial graded practices (Yarborogh & Johnson, 2000).

In a 1990-1991 study co-sponsored by the Kentucky Education Department and the Appalachia Educational Laboratory, a lack of parent and teacher understanding of the nongraded philosophy and strategies was cited as the greatest obstacle to overcome in transitioning to nongraded programs (Davis, 1992). Multiage instruction has been not just another way of grouping children but a complete restructuring of the school system, meaning retraining staff and parents and revising teaching strategies (Pavan, 1992). According to Yarborough and Johnson (2000), this time consuming and expensive overhaul is a transition most superintendents and principals are reluctant to take on. Furthermore, school leaders must be skilled in leading not only curriculum change but also the way the organization functions. To do so they must operate politically, carefully managing the opposition that may surface from parents, staff, and community. Managing such a big change can often result in the loss of support for administration. When opposition is strong enough, even if the change being made may be in the best interest of children, it may not be worth the risk when the decision may involve the loss of one's job or reputation.

According to Davis (1992), and Song, et al (2009), another challenge has been a sense of isolation that has existed if multiage instruction was present in a graded environment. This is often because the multiage classroom tends to operate in a predominately traditional school system. Offering both graded and nongraded

options within one school setting may be both confusing for parents and polarizing for staff, as traditional teachers tend to defend their own practices and fail to understand the appropriateness of the nongraded option. This creates the isolation that so many multiage teachers experience.

On the other hand, if a school system does decide to offer both options within their school setting, according to Lloyd (1999), only teachers with some commitment to or interest in the concept of "multiage" should be assigned to teach in the multiage classroom. That commitment would suggest a willingness to learn and to utilize the more developmentally appropriate strategies that define multiage instruction. In reality, however, while some teachers see the logic in the philosophy, adopt the strategies, and eagerly step forward as a multiage instructor, other teachers may have been involuntarily assigned to a multiage classroom to fill a school's need. This fact alone may be enough to explain why many multiage classes have been so successful, or why perhaps others have seen less positive results. When teachers have been asked to teach utilizing strategies that they have not been properly oriented to, they may struggle and become stressed, which will negatively impact the outcome for children (Lloyd, 1999). Many teachers working in multiage settings have reported having little or no preparation for teaching students of different ages and lack confidence in their ability to effectively design group work among students who vary in abilities and ages (Farkas & Duffett, 2008). Furthermore, teachers who are not trained to work with different ages at once may subconsciously or consciously resist doing so, which can significantly slow the change process (Davis, 1992). Even multiage teachers who have supported the process and found success in their efforts can be undermined in

their own educational setting by their peers who may resist supporting the nongraded system out of fear that they may one day be asked to change their practices (Song et al., 2009).

Finally, yet another challenge generated by the multiage model is that teaching in a multiage classroom has required substantial specialized training and additional resources. Districts that previously relied heavily on a single set of textbooks and instructional manuals have needed to acquire more hands-on materials and a variety of supplementary books (Gaustad, 1992a). These changes may be costly, and in times of economic cutbacks, those extra dollars may be difficult to access.

Regarding the disadvantages to the multiage model, in their 1991 study of multiage instruction, Katz et al. (1991) found that the potential disadvantages for children in a nongraded classroom included a tendency for teachers of mixed-age children to provide fewer challenges for older children, because at times it was easier for teachers to allow the older children to mentor the younger children. To diffuse this risk, teachers must make a conscientious effort to provide enriching experiences for the older students. Another disadvantage is that some younger children may have been frustrated by the perceived gap between their work and that of older students. Their frustration can lead to feelings of inadequacy and/or failure. Yet another disadvantage is that some children may have difficulties working independently and therefore fail to be productive during work time (Appalachia Educational Laboratory, 1996). The element of student choice in the classroom does minimize the possibility

of this issue creating any major problems, but students do need initiative in order to do their best in a multiage setting.

With multiage instruction occasionally it will happen that a child will remain with an inadequate teacher for two years rather than one year. In the occasion that a child and teacher fail to form a bond or a good fit, the situation should be jointly addressed by parents, teacher, and administration. Yet another expressed concern is that some parents of the older children may be concerned that their children may not be sufficiently stimulated because of the younger children (Elkind, 1989). In reality, the older students have tended to become mentors and leaders in the classroom, which builds compassion and nurturing skills that otherwise may not have the opportunity to develop. The final disadvantages of multiage classrooms identified by the experts were the difficulty in scheduling individual times for students to work with special teachers, and the challenge for administrators to provide extra planning time needed to prepare for the instruction of a wide range of abilities (Katz et al., 1991). The disadvantages must be properly planned for and addressed in order to minimize their impact on the potential positive outcomes of the multiage classroom.

Even in districts in which interest was present to consider movement toward a nongraded system, the obstacles to be addressed can slow or interrupt the process. Cotton (1993) identified the following barriers to the implementation of nongraded programs:

1. Parents and community members frequently lack understanding of the nongraded education concepts and its advantages,

2. Teachers are normally trained in methods for teaching single-grade classes and are resistant to change,
3. Teachers fear that teaching nongraded classes will require more preparation time and a larger repertoire of instructional materials and methods,
4. There may be a lack of administrative support,
5. The textbook industry structures its product for single-graded classes, encouraging conformity and is unresponsive to a range of abilities, and
6. Standardized testing methods are designed for use with students in single-grade arrangements. (Cotton, 1993, pp. 8-9)

These are some of the challenges that must be addressed in the transition process. Today even the most promising ideas must compete with administrators' needs to address such issues as technology, violence in schools, discipline, AIDS prevention, funding cutbacks, and *No Child Left Behind* standards. Nongradedness therefore compels educators to take their time to develop an understanding and support for philosophical change, especially in the midst of many other complex issues districts face (Yarborough & Johnson, 2000). If, however, pupil achievement in schools is the targeted outcome, then educators should commit themselves to the strategies that will contribute to the greatest results. State legislatures in Kentucky, Mississippi, and Oregon at one point in time mandated multiage classes for K-3, while other states such as Pennsylvania, Florida, Alaska, Georgia, California, Texas, Tennessee, and New York took serious steps towards developing similar programs. This is evidence that educators across the United States were meeting the challenges and were committed to the practice (Lodish, 1992).

Transition from Graded to Nongraded Instruction

According to Lloyd (1999), some educators may have viewed the increase in multiage instruction as just another pendulum swing; however, revisiting old ideas often has merit. Often a practice from the past resurfaces because some circumstance has changed, and the potential appropriateness of an old strategy in a new situation brings new credibility. Reusing strategies that were earlier dismissed may better be described as vertical zigzagging, during which educators revisit the past but return to the relevance of the present and what works best with newly-acquired knowledge and research.

In a 1991 collaborative report by the Kentucky Education Association, researchers and educators expressed disappointment that more districts had not shown any movement towards an ungraded organization sooner, considering the many advantages for students cited with this model. Gaustad (1992a) further pointed out that some of the resistance to nongraded programs was the result of poorly managed attempts to implement the transition. For example, many of the "open education" programs of the 1960s and 1970s were said to be nongraded but in fact, they were not true nongraded structures that implemented the multiple strategies that have defined this model. In addition, when some of the multiage philosophy and strategies were implemented, these approaches were not clearly explained to parents and community members and as a result, they were perceived negatively. This lack of support and understanding for the nongraded model on the part of teachers, parents, and community was perceived as the most crucial factor in the program's success or lack of success (Davis, 1992). Attempts to implement nongraded programs without

providing theoretical understanding or practical training for teachers have consistently led to program failure in the past (Gaustad, 1992b). This identifies one of the critical first steps in the transition to nongradedness and that is to clearly define what nongradedness is and why it may be a preferred practice for children (Yarborough & Johnson, 2000).

Research has failed to identify clear-cut, nationally agreed-upon guidelines for nongradedness. However, Anderson (1993) set criteria that should be present, including:

> the replacement of labels associated with gradedness, the removal of competitive/comparative evaluations, inclusion of at least two ages within a group, ensuring that all groups are flexible and fluid, organizing the teaching staff by teams, developing a flexible and disciplinary whole-child oriented curriculum, and adopting official policies consistent with nongradedness in the school and at the school board level. (pp. 10-11)

The lack of agreed-upon guidelines has likely been a deterrent to those who might seek to implement nongraded procedures. However, guidelines should not become so specific that they are impossible to meet, discouraging those who might want to move in the direction of multiage practices (Yarborough & Johnson, 2000).

Much more than the beauty or the design of the building, or the availability of staff and student resources, the ultimate success of any program lies in the commitment of the faculty to the model. The attitude of faculty can unfortunately make or break any model, and that would be especially true of a model that is perceived to require more energy or time to implement (Yarborough & Johnson,

2000). It is therefore crucial to engage faculty in the decision-making process and prepare them for the change. Any school attempting to establish a nongraded model should inform and train faculty on what is known about nongradedness and how it varies from graded-classroom strategies. The training on nongraded strategies should include information on cooperative learning, reading and writing processes, assessment and evaluation, motivation, and parent/teacher relations (Davis, 1992). Optimism, excitement, and confidence, along with knowledgeable and inspired leadership, have also been necessary to a healthy transition (Yarborough & Johnson, 2000).

Parent and community support is also crucial to the success of multiage instruction because it still remains unfamiliar to most citizens. Multiage practice has evolved over time as research has revealed many positive outcomes for children, but to adults outside of the educational arena, these practices may seem like an extreme departure from familiar ways, which can result in strong opposition if these parties are not included in the change process (Gaustad, 1992b). To prepare for the potential change, information should be shared in many different ways including newsletters, brochures, published articles, notes, and letters. In addition, surveys and questionnaires should encourage and allow for feedback and suggestions (Gaustad, 1992b).

According to Davis (1992), local board support is another critical piece in the transition to a nongraded primary system. The initiative will not work without a board's enthusiastic and unwavering endorsement. The transition will require the board to provide resources, provide goals and policy, and monitor progress

throughout the transition. They may also be required, along with the superintendent, to provide information to the parents and the larger community. Most importantly, they must be willing to work to provide the financial resources necessary for staff training, and equipment.

Based on current research studies, some districts now, or in the future, may weigh the risks and the rewards and make a decision to take steps toward the implementation of this practice. Some key points of consideration for school staff that may increase the likelihood of success in the transition to a non-graded model are summarized from the work of Bredekamp (1987), Davis (1992), Gaustad (1992b), Hunter (1992), Katz et al. (1991), and Elkind (1989) and include the following transition strategies:

1. State legislators may need to take action to address the required use of standardized testing and the publication of textbook series organized on a grade-level basis.
2. Principals and administrators should provide adequate time for planning, decision making, and preparation.
3. Teachers should be provided with training and support for understanding and implementing multiage practices.
4. Parents and the community should be involved in the transition process, and they should be informed about the benefits of nongraded programs.
5. Implementation should be gradual but continuous, for if it happens too fast, parents and staff may not be ready for it; if it happens too slowly, momentum may be lost.

6. Experts strongly recommend the use of team teaching in multiage classrooms.
7. Some curricula are most effectively taught to children of similar experience and achievement. Cooperative projects lend themselves to heterogeneous grouping.
8. Learning should take place in a context meaningful to children, be relevant to their lives, allow them to take active roles, engage them in many self-selected activities, and utilize multiple mind/body functions.
9. There should not be an over-reliance on standardized test results; instead, assessment should focus on narrative descriptions of student progress, samples of children's work as in portfolios, and parent/child conferences. (Cotton, 1993)

Materials developed by the Kentucky Department of Education suggested the first step in the three-step process transitioning to multiage instruction is the exploration process during which parents, staff and administrators outline the rationale for change and the critical issues in the process. The second step is the orientation stage in which all teachers, support staff, and parents complete the planning, policies, and required training. The final step is the implementation process, which includes on-going dialogue with parents and teachers and an evaluation of the plan throughout the year (Davis, 1992).

These research findings and guidelines may help interested educators and institutions move forward to a meaningful transition to nongraded classrooms, with an understanding that the transition takes time. One of the country's leading

advocates of nongradedness, Robert Anderson (1993), estimated that launching a nongraded program is at least a two-year process, and to develop a mature, smooth running operation will likely require another five years. In moving to the nongraded primary model, Gaustad (1992a) suggested adding a few new elements at a time, rather than changing the entire structure at once. Each element would require training and then evaluation and adjustments in practices before moving on to another aspect of the program. If change is to take place, districts must have insightful leadership, an understanding of nongraded systems, and a long-term vision and commitment to this plan. More importantly, they must be willing to put the well being of their students above politics and the critics. Superintendents and principals reluctant to take on the challenges of complete restructuring of the school will likely never get nongradedness off the ground (Yarborough, & Johnson, 2000).

Conclusion

The graded school system according to Goodlad and Anderson (1963) was driven by a need for managing large number of students rather than meeting individual students' needs. Since the transition came about more as a convenience for teachers rather than because of proven positive outcomes for students, several developments emerged to challenge the graded system during the close of the 19th and early 20th centuries. The negative impact of retention, and the attention to meeting the needs of every student, shifted the educational focus to strategies that were actually proven practices from the past, one of which was multiage instruction. Studies comparing students' academic and social achievement found mixed results, but more frequently the results were positive for students receiving instruction in the nongraded

classroom. Studies were also clear that multiage instruction required unique strategies, initial and ongoing training, and more planning time for teachers. Recognizing the need for training, and the significant impact that training would have on the outcomes for students, the purpose of this Delphi study was to identify the specific training and support necessary to prepare teachers and administrators to successfully implement the concept of multiage instruction, pinpoint the strategies and challenges for teachers, and ascertain the pros and cons for students who experience the multiage environment.

CHAPTER 3. METHODOLOGY

Introduction

This Delphi study gathered input from multiage experts to provide clarity to current circumstances regarding multiage instruction. The following research questions guided this study:

RQ1. What are the common practices and strategies used in a multiage classroom?

RQ2. What are the pros and cons for children enrolled in a multiage classroom?

RQ3. What training and resources are necessary to implement and support multiage instruction?

RQ4. What are some of the challenges to implementing multiage instruction?

The information gleaned from this study will be useful for school settings that are considering a transition to multiage instruction, as well as providing useful information to universities, which have a responsibility to prepare all teachers for all classroom settings. Finally, by identifying current multiage classroom strategies, this study may provide useful information to researchers who are updating studies on multiage outcomes.

Research Design

The Delphi method is especially suited to a study when there is incomplete knowledge about an issue, and the goal of the research is to find greater clarity of the issue or problem or to investigate what does not yet exist (Skulmoski, Hartman, & Krahn, 2007). In conducting the literature review on multiage instruction, studies

consistently referred to the need for teacher support and training. What appeared missing in the research is clarity on what kind of training, resources, and support is needed to maintain the practice. In addition, although there are multiple studies on the academic and social measures of children enrolled in graded versus nongraded classrooms, there is much less information available on the experts' perceived pros and cons for students, as well as the strategies used by multiage teachers and the challenges they face in maintaining a practice that is not the norm in today's school environments. The Delphi study was selected, therefore, to investigate those issues, which do not lend themselves to precise analytical techniques but may be more suited to the collective judgments of experts in the field.

As cited in Skulmoski, Hartman, and Krahn, (2007), Rowe and Wright (1999) have characterized the classical Delphi study in terms of four key elements:

1. Anonymity of the Delphi participants, which allows the participants to freely express their opinions without undue pressure to conform to the group,
2. Iteration, which allows the participants to refine their views from round to round by observing and considering the progress of the group,
3. Controlled feedback whereby the participants are informed of the other expert perspectives and are given the opportunity to clarify or change their own views,
4. Statistical aggregation of group responses, which allows for quantitative analysis and interpretation of data. (p. 2, 3)

In conducting a Delphi study, once the research questions have been identified, determining the criteria for the inclusion of experts and their selection is the next critical component (Skulmoski et al., 2007). Skulmoski et al. (2007) *as cited in Adler and Ziglio, 1996), there are four main requirements for "expertise":

1. knowledge and experience with the issues under investigation,
2. a capacity and willingness to participate,
3. sufficient time to participate, and
4. effective communication skills.

For this study two pools of experts were identified: the "practitioner" expert and the "theory" expert. To ensure that the experts met the knowledge and experience needed, criteria were set for each pool of experts. The practitioner experts were required to meet the following criteria:

1. taught in a multiage classroom for three or more years,
2. utilized teaching strategies that involve flexible grouping,
3. worked with multiage students as one classroom, rather than multiple grades and
4. received some training on instructional strategies relative to multiage instruction.

The theory experts were required to meet the following criteria:

1. a total of five or more years' experience teaching/working in an elementary school setting;
2. some experience, observation of, or knowledge of multiage instructional practices;

3. experience in providing training/consultation or preparing publications for teachers or programs based on researched best practices. Ideally theory experts would also have published journal articles, textbooks, or resource books.

According to Skulmoski et al. (2007), the Delphi method is a process used to gather and analyze the judgments of experts through a repetitive series of questionnaires. The initial questionnaire is designed based on the information desired, and distributed to the Delphi participants who complete and return the survey. The results of Round One are then analyzed using qualitative or statistical summarization, and the responses form the basis for the development of Round Two questions, which are then released. Participants are given a chance to verify their Round One responses and an opportunity to change or expand on those responses. The panelist responses in Round Two are used to develop the Round Three questionnaires, which include statements to verify Round Two results and may also include additional questions or statements more focused on the specifics of the research. Again, the research participants are given the opportunity to change their answers and to comment on the emerging perspectives of the research participants. According to Skulmoski et al. (2007), the process stops when "consensus is reached, theoretical saturation is achieved, or sufficient information has been exchanged" (p. 5). The goal, however, is not to attempt to reach consensus, but to expose differing positions and arguments for both sides of the issue (Linstone & Turloff, 1975).

Population and Sampling Procedures

The sample size goal for this study was a pool of 30 experts, ideally 15 of them being practitioner experts and 15 of them being theorist experts. When the group is homogeneous, as in the expert samples, a smaller sample of between 10 to 15 people may yield sufficient results (Delbeq et al., 1975). However, to reduce group error and increase reliability, a sample of 20 experts, 10 in each pool, was the minimal acceptable target sample. Experts were sought from different regions of the United States, and potential participants were located by scanning published multiage journal articles and resource books, contacting training centers and universities where multiage training is offered, and through personal referrals.

Initial letters and/or emails were sent to a pool of 108 potential expert candidates to explain the study, the criteria to participate, and to determine commitment to engage in the three-round study (Appendices A & B). Twenty-six letters or emails were sent to candidates who published journals or books or who were identified in published articles or resource books as experienced in multiage instruction. From those contacts four invitations were returned as "undeliverable," 11 responded, and eight agreed to participate and met the expert criteria. Seventy-seven letters or emails were sent to individuals who had attended or provided training at the National Multiage Institute at Northern State University. From those contacts, eight invitations were returned as "undeliverable," 21 responded, and eight candidates met the criteria and agreed to participate in the study. The final five participants were secured through referrals made by colleagues who were aware of teachers with credible expertise in multiage practice. The final pool of experts totaled 21: 10

practitioner experts and 11 theory experts. An effort was made to secure experts who spanned a wide geographic area, with experiences that varied in public and private schools as well as from small and larger communities. Although multiage instruction does continue to thrive across the United States, due to the recent decline in school environments currently using multiage strategies, locating the practitioner experts was a rigorous and time-consuming process.

The desired criteria for practitioner experts were as follows:

1. three or more years of working/teaching in a multiage classroom,
2. the use of teaching strategies involving flexible grouping,
3. teaching the class as one body, rather than separate grades, and
4. having received some training on instructional strategies related to multiage instruction.

The following individuals were selected as practitioner experts in this study:

Andrea Ferrero
Prek- 12 experience/Multiage trainer
Pi Lambda Theta honors
Golden Key International Honor Society

Jeff Broome
Professor
University of Northern Texas
Published multiage articles

Jennifer Jackson
Multiage teacher
Detroit Lakes, Minnesota

Judy Wangemann
Principal/teacher
Christian Worship Ctr. Academy
Zillah, Washington

Diane Thiel
Multiage teacher
Moorhead, Minnesota

Jim Grant
Executive Director of SDE
New Hampshire

Camille Brandt
Asst. Professor
Minnesota State University Moorhead
Montessori teacher/director

Patricia Bryant
ECSE teacher; Dble. Masters
Cartwright School District
Phoenix, Arizona

Hannele Al Uariachi
1st/2nd grade multiage teacher
Undergrad – Duke University
Attended beginners &
Advanced Multi-Age Institute

Becky Anderson
1st/2nd grade teacher
Moorhead, Minnesota

The desired criteria for the theory experts were as follows:

1. a total of five or more years working in an elementary school setting;

2. some experience, observation of, or knowledge of multiage instruction;

3. experience in providing training/consultation or preparing publications for teachers or programs based on researched best practices.

The following individuals were selected as "theory" experts for this study:

Barbara Pavan, Ed.D.
Emeritus Professor of Educational Administration
Temple University, Philadelphia, PA
Author of multi-age books and articles

Emilie Rodger
Associate Professor
Northern Arizona University
Multi-age researcher and trainer

Chriselda Lozon
Northern State University faculty
Multi-age Coordinator of American School
Milan, Italy

Demetra Evangelou
Professor
Purdue University
Author of NAEYC multi-age article

Dr. Lilian Katz
Professor Emerita
University of Illinois
Author of many multi-age articles

Eileen Griffin
Former Director, Griffin Center
Co-Founder of Griffin Center
Guilford, CT

Peggy Jones
4/5/6th grade multi-age teacher
Foothills Academy Elementary Prep
AZ

Dr. Kathleen Burris
Professor
Middle Tennessee State University
Multi-age trainer/instructor

Karen Brimecombe
Principal, K–4 multi-age school
John Lyman Regional School
Teaching & Learning Collaborative
CT

Linda Hargan, Ed.D.
Founder and CEO Emerita
Assistant Commissioner KY Department of Education

Dr. Sandra Stone
Director of Multi-age Institute
Northern Arizona University
International multi-age trainer

Although this was not a criterion, all but one of the multiage practitioner experts had experience teaching in a traditional, single-graded classroom as well as the multiage environment (see Table 1). They averaged 5.4 years of experience teaching in a single-graded elementary school setting, ranging from 1 to 10 years of experience. The practitioner experts did their graded teaching in the states of Florida, Minnesota, Arizona, North Dakota, and an American School in Morocco.

Although this was not a required criterion, out of the 11 theory experts in this study, nine had experience teaching in a traditional graded classroom, averaging 8.5 years of experience in that setting (see Table 1) ranging from 2 to 18 years of experience. The states in which they taught in graded schools were New York, Texas, California, Arizona, Connecticut, Louisiana, and an American School in Japan.

Table 1. Summary of panelists' teaching experience in traditional classrooms

Expert Participants	Practitioner Experts $N = 10$	Theory Experts $N = 11$
Number of Panelists with Teaching Experience	9	9
Average Years Teaching in Traditional Classroom	5.4	8.5
Range of Experience in Traditional Classroom	1-10 years	2-18 years

The graded schools in which the 10 practitioners taught were both public (n = 7), and private schools (n = 3): K-5 schools (n = 1), K-6 schools (n = 6), and K-12 schools (n = 2). The eleven multiage theory experts teaching experiences took place in public schools (n = 8); private schools (n = 3); in K-6 buildings (n = 6); and a K-12 institution (n = 2). See Table 2.

Table 2. Types of graded schools where expert panelists taught

Types of Graded Schools	Practitioner Experts	Theory Experts
Public	7	8
Private	3	3
K-5	1	0
K-6	6	6
K-12	2	2

Practitioner expert panelists taught in graded classrooms in rural communities (n = 3); communities with a population less than 1500 (n = 2); with a population from 1500–5000 (n = 2); and cities with populations over 5000 (n = 6). The size of the communities in which the theory experts taught in graded classrooms ranged from rural (n =2), city with less than 1500 (n = 1), from 1500 – 5000 (n = 2); to cities with populations over 5000 (n = 6). See Table 3.

Table 3. Size of communities in which multiage panelist experts taught in multiage classrooms

Community Size	Practitioner Experts	Theory Experts
Rural	3	2
City less than 1500	2	1
City from 1500-5000	2	2
City over 5000	6	6

The practitioner expert panelists averaged 9 years of experience in a multiage setting ranging from 4 -19 years of experience each. The theory experts averaged 6.4 years of experience ranging from 3 – 17 years of experience (see Table 4).

Table 4. Expert panelists' experience teaching in multiage classrooms

Expert Participants	Practitioner Experts $N = 10$	Theory Experts $N = 11$
Number of Panelists with Teaching Experience	10	8
Average Years Teaching in Multiage Classroom	9	6.4
Range of Experience in Multiage Classroom	4-19 years	3-17 years

There were multiple combinations of grades and ages in the multiage classrooms where our panelists taught. Practitioner experts taught in a multiage model in public ($n = 7$); private ($n = 5$); and charter ($n = 1$) school settings. Those multiage experiences took place in K-5 buildings ($n = 1$); K-6 buildings ($n = 4$); K-8 settings (2); and K-12 settings ($n = 3$). Of the theory panelist experts who taught in multiage settings, their experiences took place in public school ($n = 8$); private schools ($n = 1$); and charter schools ($n = 1$). The school models they taught in were K-6 ($n = 7$) and K-12 ($n = 1$). See Table 5.

Table 5. Types of multiage schools where panelist experts taught

Types of Multiage Schools	Practitioner Experts	Theory Experts
Public	7	8
Private	5	1
K-5	1	0
K-6	4	7
K-8	2	0
K-12	3	1

Practitioner experts who taught in multiage classrooms taught in rural communities ($n = 2$); cities less than 1500 ($n = 1$); cities with populations between 1500-5000 ($n = 2$); and cities over 5000 ($n = 6$). Theory experts who taught in multiage classrooms taught in cities between 1500 – 5000 ($n = 1$) and cities over 5000 ($n = 7$). See Table 6.

Table 6. Size of communities in which multiage experts taught in multiage classrooms

Community Size	Practitioner Experts	Theory Experts
Rural	2	0
City less than 1500	1	0
City 1500-5000	2	1
City over 5000	6	7

Out of the 10 practitioner experts, four of them served as an administrator in a multiage school setting, eight of them had provided multiage training to others, and three of them had actually published on the topic of multiage instruction. Three of the theory panelist experts also at some time served as an administrator in a multiage school setting; eleven have provided multiage training to other, and eight of the 11 have published articles or books on multiage instruction (see Table 7).

Table 7. Other multiage experiences of expert panelists

Type of Involvement	Practitioner Experts	Theory Experts
Administration	4	3
Giving training to others	8	11
Publishing in journals or books	3	8

Approval of the Institutional Review Board (IRB) was obtained from North Dakota State University before sending the first survey. All participants in the study submitted their consent to participate prior to completing the first round surveys. Experts were offered the option to disclose their participation in the study as an expert or to remain anonymous; neither choice would exclude them from participation. All 21 participants choose to disclose their participation.

Instrumentation

A Delphi survey instrument was developed by the researcher, and this provided an opportunity for each panelist to respond to 55 Likert scale statements. The statements in the first round instrument were developed based upon issues identified in the literature review. The survey was sent to two education experts to review for clarity and readability. The experts who reviewed the survey were not included in the research study, but their feedback was utilized to make any needed changes in the Round One questionnaire. The instrument questions fell into three themes or construct areas:

1. Teacher strategies and challenges (26 statements),
2. Student/school pros and cons (14 statements), and
3. Training and resources (15 statements).

In Round One of the study, the five response choices provided for each statement were *strongly disagree, disagree, agree, strongly agree,* and *no judgment.* The experts could not move on to the next statement until they had selected an answer. In addition, panelists were asked to defend their responses with comments.

The second survey consisted of 31 statements and questions. There was consensus on 30 statements from Round One. Of the 31 items in Round Two, 18 were Likert scale statements reintroduced from Round One, with a scale of *strongly disagree, disagree, agree, strongly agree,* and *no judgment*. Four questions from Round One were changed from a Likert scale question to an open-ended question to obtain qualitative data. Two questions were removed from Round One because they were determined to be difficult to comprehend by the panelists. Four statements that reached consensus in Round One were reintroduced in an open-ended format to pursue more detailed content on the topic. When the Likert statements were re-introduced, they were followed by all comments posted by the panelists in Round One. Participants were asked to carefully review the other panelist's comments before selecting their new response. Participants were encouraged to add any further comments if they were not already represented in the summaries.

The third round survey consisted of 18 Likert scale statements, a summary of the 11 open-ended questions, and a summary of the panelists' responses to those open-ended questions. Consensus was reached on two questions in Round Two, and two questions that were new in Round Two were reintroduced to seek possible consensus. In the Likert scale statements, the comments from both Round One and Round Two followed each statement. Participants were asked to review and consider all comments before they selected their final response. Additional comments could be added if the remarks were not yet represented in the summaries listed. Panelists were also free to add any further remarks to the open-ended summaries that were included in the survey.

Data Collection Procedures

A total of 21 participants acknowledged that they met the criteria as theory or practitioner experts and were invited to participate in the study (Appendix B). Their consent was secured and a link to the first round Survey Monkey instrument was emailed or sent to the participants. The experts were asked to complete each questionnaire within seven to 10 days of receiving the email. A 10-day and 14-day reminder was sent out to all experts who had not completed the survey (Appendix C). Although a few participants went well beyond the desired timeline, all 21 experts completed the survey in Round One. Responses from the first round were compiled along with the explanations that accompanied each response. Items that showed statistical consensus typically were removed from the instrument; however, consensus questions at times would also prompt a new question to investigate panelists' rationales more deeply. In this four-point Likert scale survey, consensus was determined with a mean score of greater than 3 or less than 1 with a standard deviation of less than 1, and an agreement or disagreement percentage of 80% or greater. The decision for consensus was determined by following the criteria in guidelines for Delphi research (Hasson, Keeney, & McKenna, 2000).

Following the analysis of the Round One data, an invitation to participate in Round Two along with the Survey Monkey link was sent to all panelists (Appendix D). The second survey consisted of 31 statements or questions. Reminders were sent out to the panelists who did not return their surveys, at the 10- and 14-day checkpoints after the second round survey was sent. All but one expert completed the Round Two survey within the timeframe. With hopes to maintain 100% participation

in the study, another email was sent out on day 21.The panelist did not respond, and therefore, Round Two was closed with 20 out of 21 panelists participating: nine practitioner experts and 11 theory experts.

Approximately four weeks after Round Two, the final invitation and survey link was sent out (Appendix D). The third round survey consisted of 18 Likert scale statements, a summary of the 11 open-ended questions, and a summary of the panelists' responses to those open-ended questions. Expert participants were asked to complete this survey within seven days. To avoid losing any additional participants in the third round, a note of thanks and encouragement along with a reminder to complete the survey was emailed after three, five, and again after 10 days. The same expert who failed to complete the survey in Round Two also failed to complete the survey in Round Three, so a follow-up phone call was made. Although the final panelist affirmed by phone that he or she would complete the survey, it was not completed within the timeframe allocated. Therefore, Round Three closed with 20 of the 21 panelists participating, nine practitioner experts and 11 theory experts.

Data Analysis Procedures

Data collected for this study were analyzed using multiple approaches. Since the first survey consisted of statements with a Likert Scale of *strongly disagree, disagree, agree, strongly agree* and *no judgment,* the scale was coded to a numeric score of 1, 2, 3, 4, and 0. Strongly disagree was coded to a 1, disagree was coded to a 2, agree was coded to 3, strongly agree was coded to a 4, and no judgment was coded to a 0. The experts who selected no judgment were not included in the calculations for each statement, which resulted in varying participant numbers for each statement. To

determine consensus on each statement, means, standard deviations, and a percentage of agreement were utilized. A mean of > 3.00 with a standard deviation of < 1.0 and an agreement percentage of 80% or higher (those that selected strongly agree or agree) indicated consensus to agree. A mean of < 2.00 with a standard deviation of < 1.0 and a disagreement percentage of 80% or higher (those who selected strongly disagree or disagree) indicated consensus to disagree. The process was performed for each statement at the end of each round. Once consensus was reached, the statement was removed from the next survey.

Although two pools of exerts were secured for this study, practitioner experts and theory experts, all consensus data were summarized in one report. The idea of seeking two sets of experts was not to compare the expert opinions but rather to garner a well-rounded perspective of multiage practices. The practitioner experts had the richness of experience within their prospective classrooms, and the theory experts brought the knowledge of best practices in education, being highly respected as trainers and publishers in this field.

CHAPTER 4. RESULTS

This Delphi study was performed to ascertain multiage theory experts and practitioner experts' perceptions in response to the following research questions:

RQ 1: What are the common practices and strategies used in a multiage classroom?

RQ 2: What are the pros and cons for children enrolled in a multiage classroom?

RQ 3: What training and resources are necessary to implement and support multiage instruction?

RQ 4: What are some of the challenges to implementing multiage instruction?

Because the Delphi process is fluid and flexible, what began as four research areas was reduced to three, primarily because of the direction in which the expert panelists' comments took the survey. Thus questions one and four were combined. Results will be presented in the following three construct areas: teacher strategies and challenges, school/student pros and cons, and training and resources. Within each construct the results will be categorized into statements that reached consensus to agree and consensus to disagree in each round, and statements that after three rounds did not reach consensus.

Response Rate

The pool of candidates began with 89 potential experts who were invited by email or phone to review the criteria to participate in the study. Twenty-one experts met the criteria and agreed to participate in the study, 10 practitioner experts and 11 theory experts. All 21 experts participated in Round One of the study. During Round

Two and in Round Three, one of the practitioner experts failed to respond to the survey after numerous reminders, resulting in a 95% response rate for Round Two and Round Three.

Demographic Data

When assembling a pool of experts for this study, an effort was made to attract participants with experiences in many different states, from both small and large communities, who had worked in both public and private schools. Although the criteria did not require experience in teaching in an elementary school setting, it enriched the study that so many of the practitioner and theory experts did have teaching experience in traditional graded classrooms as well. It meant that these experts could contrast and compare their experiences and the experiences of the children they served in both settings.

Of the 10 practitioner experts, nine experts had experience teaching in traditional classrooms, ranging from 1-10 years of experience per candidate, spanning four states as well as an American school in Morocco. In addition, the practitioner experts experience ranged from 4-19 years of experience in multiage classrooms, in seven different states. Four of the practitioner experts also served as administrators in a multiage school setting; eight of them had provided training or consultation to other multiage teachers; and three of them had published in journals on the topic of multiage instruction.

Nine out of the 11 theory experts taught in a traditional elementary school classroom, with 2-18 years of experience with graded instruction. Their traditional teaching experiences took place in six different states and an American School in

Japan. Eight of the 11 also taught in multiage settings with 3-17 years of experience, in six different states and an American school in Italy. Three of the theory experts had served as an administrator in a multiage school setting, eight of them had published books or articles on multiage instruction, and all 11 of them had provided training or consultation on multiage instruction.

Findings

The responses to statements were converted to numeric data using the following: *strongly disagree* = 1, *disagree* = 2, *agree* = 3, *strongly agree* = 4, and *no judgment* = null. The results are presented within each construct as statements that reached consensus to agree, statements that reached consensus to disagree, and statements that did not reach consensus. Statements were determined to reach statistical consensus to agree if the data showed a mean response of > 3.00, and a standard deviation of < 1.00, and an agreement rate of 80% or higher. Statements were determined to reach statistical consensus to disagree if the data showed a mean response of < 2.00, a standard deviation of < 1.00, with a disagreement rate of 80% or higher. The findings will be presented for the three construct areas of teacher strategies and challenges, school/student pros and cons, and training and resources.

Construct One: Teacher Strategies and Challenges

Twenty-six questions were asked in this construct area. The questions selected were designed to explore the key issues in establishing a viable multiage experience; to examine the space needs, class size, and strategies that ensure success; and to reveal what challenges teachers may encounter in the multiage setting.

Consensus to agree. The experts reached consensus to agree on seven of the 26 statements (see Table 8) in the construct area of teacher strategies and challenges.

Table 8. Multiage teacher strategies and challenges statements that reached consensus to agree for all experts

Statement	*n*	Mean	*SD*	% Agree
1. Multiage instruction is a credible practice for children in the elementary school years.	20	3.65	.90	90.0
2. Only teachers who are willing to teach in a multiage classroom should be assigned to a multiage setting.	19	3.63	.68	89.4
3. The Board of Education in each state should be working to expand multiage instruction because it is the most developmentally-appropriate practice for elementary school children.	19	3.57	.96	89.4
4. Teachers in multiage classrooms are more likely to teach to the individual ability level of each child in the classroom.	20	3.45	.60	95.0
5. Parents of children in multiage classrooms are generally excited about multiage instruction.	18	3.39	.70	88.9
6. The process of grouping and regrouping children for instruction is more prevalent in multiage classrooms than in the single-graded classroom.	21	3.19	.75	80.9
7. If a child starts out in a multiage setting at age five, it would be best for the child to stay in multiage settings through his or her elementary school years.	20	3.05	59	85.0

Note: In this and all subsequent tables, % agree includes both agree and strongly-agree responses.

Statement one, *multiage instruction is a credible practice for children in the elementary school years,* received consensus in Round Two of the study. Twenty

panelists responded with 90% agreement (see Appendix F), with a mean score of 3.65 and a standard deviation of .90.

The second statement, *only teachers who are willing to teach in a multiage classroom should be assigned to teach in a multiage setting,* received consensus in the first round (Table 8). Nineteen respondents compiled a mean score of 3.63, a standard deviation of .68, and an agreement (agree or strongly agree) percentage of 89.4 (Appendix F).

Statement three, *the Board of Education in each state should be working to expand multiage instruction because it is the most developmentally-appropriate practice for elementary school children,* reached consensus in Round One (Table 8). Nineteen experts responded to this statement with a mean of 3.57, a standard deviation of .96, and 89% of the panelists either agreed or strongly agreed with this statement (Appendix F).

The fourth statement, *teachers in multiage classrooms are more likely to teach to the individual ability level of each child in their classrooms,* also reached consensus in the first round (Table 8). Of the twenty panelists responding to this statement, 95% either agreed or strongly agreed with the statement (Appendix F). The mean score was 3.45, and the standard deviation was .60.

Statement number five, *the process of grouping and regrouping children for instruction is more prevalent in the multiage classroom than in the single-graded classroom,* received consensus in Round One (Table 8). Of the 21 who responded, 80.9% agreed or strongly agreed with the statement (Appendix F) with a mean of 3.19 and a standard deviation of .75.

Consensus to agree for statement number six, *parents of children in multiage classroom are generally excited about multiage instruction*, was obtained in Round One. Of the 18 panelists who responded, 88.9% agreed or strongly agreed (Appendix F) with this statement, with a mean of 3.39 and a standard deviation of .70 (Table 8).

Statement seven in construct one, teacher challenges and strategies, received consensus to agree in Round Two (Table 8). Twenty panelists responded to the statement *if a child starts out in a multiage setting at age five, it would be best for them to remain in a multiage setting throughout his/her elementary school years.* The mean for this statement was 3.05, with a standard deviation of .59 (Table 8). Of the 20 panelists who responded to this statement, 85% either agreed or strongly agreed (Appendix F).

Consensus to disagree. In statement one, *there is no difference between the manner in which the classroom space is arranged in the multiage classroom and the typical room arrangement in the single-graded classroom,* 94.4% of the 18 panelists responding either disagreed or strongly disagreed with this statement (Appendix G). The mean for this statement was 1.72, with a standard deviation of .57 (Table 9).

Table 9. Multiage teacher strategies and challenges statements that reached consensus to disagree for all experts

Statement	*n*	Mean	*SD*	% Disagree
1. There is no difference between the manner in which the classroom space is arranged in the multiage classroom and the typical room arrangement in the single-graded classroom.	18	1.72	.57	94.4
2. The number of students in a multiage classroom in the elementary grades should be less than the number of students in a single-graded classroom because it is harder to manage the varied needs of children in a multiage classroom.	20	1.95	.89	85.0

In statement two, *the number of students in a multiage classroom in the elementary school grades should be less than the number of student in a single-graded classroom because it is harder to manage the varied needs of children in a multiage classroom,* 85% of the panelists disagreed or strongly disagreed with that statement (Appendix G). Twenty panelists responded to this statement with a mean score of 1.95 and a standard deviation of .89 (Table 9).

Construct Two: School/Student Pros and Cons

In the second construct, schools/student pros and cons, there were 14 statements offered to the panelists. Six statements received consensus to agree, and six statements reached consensus to disagree. The two non-consensus statements were re-presented in Round Two. Two of the statements, which reached consensus, to agree were also re-presented as an open-ended question to gather more information on why panelists agreed with the statements.

Consensus to agree. Statement one, *elementary children tend to get along better, nurture, mentor, and act more like family in a multiage classroom than in the single-graded classrooms,* reached consensus in the first round. Out of 21 respondents, 95.2 % agreed or strongly agreed with this statement (Appendix H), with a mean score of 3.81, and a standard deviation of .51 (Table 10).

Statement two, *it is beneficial to the student when they have the same classroom teacher for more than one year,* and statement three, *it is beneficial to the teacher when a child is enrolled in their classroom for more than one year,* both received consensus in the first round with 21 panelists in 100% agreement with these

two statements (Appendix H). The mean for both statements was 3.76, and the standard deviation for both statements was .44 (Table 10).

Statement four, *multiage classrooms are less stressful for elementary children than single-graded classrooms,* also reached consensus in Round One. Twenty participants responded to this statement with 100% in agreement (Appendix H). The mean score was 3.65, and the standard deviation was .49 (Table 10).

Statement five, *in general, elementary children will do better socially in a multiage classroom versus a single-graded classroom,* reached consensus in Round One with 95.2% agreeing or strongly agreeing with that statement (Appendix H). The mean was 3.57, and the standard deviation was .75 (Table 10) with 21 panelists responding.

Seventeen panelists responded to statement number six, *in general, elementary children will do better academically in a multiage classroom versus a single-graded classroom.* The mean for this statement was 3.47, with a standard deviation of .72 (Table 10), and 88.2% of the panelists agreed or strongly agreed with this statement (Appendix H).

Consensus to disagree. In the second construct, schools/students pro and cons, there were six items that reached consensus to disagree. The first six statements related to the type of student who is best suited for the unique instructional strategies of a multiage classroom. Consensus for the first six statements in Table 11 was reached in the first round.

All of the 19 panelists, or 100%, disagreed with statement one (Appendix I), *due to their unique needs, English as a second language students (ESL) would perform better socially and academically in a single-graded classroom rather than in a multiage setting.*

Table 10. Statements that reached consensus to agree among experts regarding school/student pros and cons

Statement	*n*	Mean	*SD*	% Agree
1. Elementary children tend to get along better, nurture, mentor, and act more like family in multiage classrooms than in single-graded classrooms.	21	3.81	.51	95.2
2. It is beneficial to the student when they have the same classroom teacher for more than one year.	21	3.76	.44	100
3. It is beneficial to the teacher when a child is enrolled in the classroom for more than one year.	21 20	3.76 3.65	.44 .49	100 100
4. Multiage classrooms are less stressful for elementary children than single-graded classrooms.				
5. In general, elementary children will do better socially in a multiage classroom versus a single-graded classroom.	21	3.57	.75	95.2
6. In general, elementary children will do better academically in a multiage classroom versus a single-graded classroom.	17	3.47	.72	88.2

The mean score for statement one was 1.26, and the standard deviation was .45. For statement two, *due to their unique needs, children in the low-normal range would perform better socially and academically in the single-graded classroom, rather than in a multiage setting,* 20 panelists responded with 100% disagreeing or strongly disagreeing (Appendix I) with this statement. The mean score was 1.4, and the

standard deviation was .50. Similar results were achieved for the next four statements in Table 11. Statement three, *due to their unique needs, gifted students, or those in the high average range, would perform better socially and academically in a single-graded classroom,* and statement four, *due to their unique needs, children with an Individual Education Plan (IEP) would perform better socially and academically in a single-graded rather than a multiage classroom,* were both completed by 21 panelists with 100% disagreeing or strongly disagreeing to those statements (Appendix I). In addition, they had identical mean scores of 1.43 and standard deviations of .51 (Table 11). Twenty panelists completed statement five, *due to their unique needs, children with behavioral problems would perform better socially and academically in a single-graded classroom, rather than in a multiage setting,* garnered 95% disagreement (Appendix I) with that statement, a mean score of 1.45 and a standard deviation of .60. Statement six, *the average student would perform better socially and academically-graded classroom rather than in a multiage setting because the classroom teacher in the single-graded setting tends to teach to the midline student,* received a 95.2% disagreement consensus (Appendix I). The mean score for statement six was 1.52, and the standard deviation was .60 (Table 11).

Construct Three: Training and Resources

In the third construct, training and resources, there were 15 Likert statements in the Round One survey. Six of the statements reached consensus to agree, and four statements reached consensus to disagree at the end of Round One. Three statements were removed from the training and resource construct due to feedback from the panelists. One of the statements removed was rewritten and re-presented to the

panelists as an open-ended question. Two statements in the training and resource construct failed to reach consensus after three rounds.

Table 11. Statements that reached consensus to disagree among experts regarding school/student pros and cons

Statement	*n*	Mean	*SD*	% Disagree
1. Due to their unique needs, English as a second language (ESL) students would perform better socially and academically in a single-graded classroom rather than in a multiage setting.	19	1.26	.45	100
2. Due to their unique social needs, children in the low-normal range would perform better socially and academically in the single-graded classroom than in a multiage setting.	20	1040	.50	100
3. Due to their unique needs, gifted students, or those in the high-average range, would do better socially and academically in a single-graded classroom rather than in the multiage classroom.	21	1.43	.51	100
4. Due to their unique needs, children with an Individual Education Plan (IEP) would perform better socially and academically in a single-graded classroom rather than in a multiage setting.	21	1.43	.51	100
5. Due to their unique needs, children with behavioral problems would perform better socially and academically in a single-graded classroom rather than in a multiage setting.	20	1.45	60	95.0
6. The average student would perform better socially and academically in the single-graded classroom rather than in a multiage setting, because the classroom teacher in the single-graded setting tends to teach to the midline student.	21	1.52	.60	95.2

Consensus to agree. In statement one in Table 12, 20 panelists responded to the statement, *teachers should visit another multiage setting before teaching in their own multiage classroom,* and consensus was reached in Round One. The mean for this statement was 3.55, and the standard deviation was .51 with 100% agreement (Appendix J).

There was strong consensus to agree in Round One on statements two through five (Table 12), all of which related to training that should be offered to the various school parties. This would include principals, superintendents, school boards, and parents.

Table 12. Training and resource statements that reached consensus to agree by all experts

Statement	*n*	Mean	*SD*	% Agree
1. Teachers should visit another multiage setting before teaching in their own multiage classroom.	20	3.55	.51	100
2. Principals of the district should have training on multiage instruction before they administer in a nongraded school.	20	3.55	.51	100
3. In districts in which multiage instruction is offered, school boards should have an orientation to multiage instruction's rationale and practices.	20	3.40	.50	100
4. In multiage school settings, parents should be offered a training and orientation meeting every school year to help them understand multiage instructional practices.	20	3.35	.67	90.0
5. The superintendent of the school district should have training in multiage instruction before he or she administers in a nongraded setting.	18	3.22	.65	88.8
6. It is difficult to find regular training and conference experiences geared for elementary teachers who work in multiage classrooms.	19	3.20	.86	84.2

Statement two, *principals of the district should have training on multiage instruction before they administer in a nongraded school,* was responded to by 20 participants, and it had a mean score of 3.55, a standard deviation of .51, and 100% agreement (Appendix J). Statement three, *in districts where multiage instruction is offered, school boards should have an orientation to multiage instruction rationale and practices,* and statement four, *in multiage school settings, parents should be offered training and an orientation meeting every school year to help them understand multiage instruction practices,* were both responded to by 20 panelists. Statement four received a mean score of 3.4, a standard deviation of .50, with 100% agreement, and statement five received a mean score of 3.35, a standard deviation of .67 (Table 12), and a 90% agreement rate (Appendix J). Statement five, *the superintendent of the school district should have training in multiage instruction before they administer in a nongraded setting,* completed by 18 panelists, recorded

88.8% agreement (Appendix J) with a mean score of 3.22 and a standard deviation of .65 (Table 12). Statement six in the consensus to agree construct for training and resources, *it is difficult to find regular training and conference experiences geared for elementary teachers who work in multiage classrooms*, reached consensus in Round One with an 84.2% agreement rate (Appendix J). The mean score for this statement was 3.2, and the standard deviation was .86 (Table 12).

Consensus to disagree. Consensus was obtained in Round One for the statements one, two, three, and four in the training and resource construct. There was 100% disagreement on statement one, *teachers who work in a multiage setting require no special training,* and statement two, *once teachers receive an initial orientation to multiage classroom practices, no further training or support is needed,* both of which were completed by 20 respondents (Appendix K). Statement one had a mean score of 1.3 and a standard deviation of .47, and statement two had a mean score of 1.35 and a standard deviation of .49 (Table 13).

Table 13. Training and resource statements that reached consensus to disagree by all experts

Statement	*n*	Mean	*SD*	% Disagree
1. Teachers who work in a multiage setting require no special training.	20	1.30	.47	100
2. Once teachers receive an initial orientation to multiage classroom practices, no further training or support is needed.	20	1.35	.49	100
3. Textbooks are designed well for use in multiage settings.	20	1.60	.75	85.0
4. Universities across the United States do an adequate job of preparing future teachers for the possibility of teaching in a multiage classroom.	20	1.71	.59	94.1

Statement three, *textbooks are designed well for use in multiage settings,* was responded to by 20 panelists, 85% of whom disagreed with this statement (Appendix K). The mean score was 1.6, and the standard deviation was .75.

Statement four, *universities across the United States do an adequate job of preparing future teachers for the possibility of teaching in a multiage environment,* was responded to by 17 panelists, disagreeing with this statement by 94.1% (Appendix K). The mean score for this statement was 1.71, and the standard deviation was .59 (Table 13).

All Construct Areas: Non Consensus Items

There were 19 statements in the third round of the survey in which panelists did not come to consensus to agree or to disagree. Sixteen of those statements were from the original survey, and while means and standard deviations shifted in each round of the survey, they did not reach the criteria for consensus. Of the 16 original statements that did not reach consensus to agree or disagree, 12 of those statements came from construct one, teacher challenges and strategies, two statements came from construct two, school/student pros and cons, and two of the statements came from construct three, training and resources. Three of the 19 non-consensus statements were new questions that were introduced in Round Two based on the panelists' remarks in Round One. Those new statements will be identified as the findings are revealed.

Statement one, *the ideal number of ages to combine in a multiage classroom is three,* was responded to by 18 of the expert panelists (Table 14). While the mean (3.10) and the standard deviation (.83) met the consensus criteria, the agreement

Table 14. Statements from all three constructs in which no consensus was reached by the experts

Statement	*n*	Mean	*SD*	% Agree
1. The ideal number of ages to combine is three.	18	3.11	.83	72.2
2. In elementary school settings where both single-graded and multiage options are offered, all teachers should be trained in multiage strategies.	19	3.10	.73	78.9
3. There is no difference between the classroom space needed for teaching in a multiage classroom and the space needed for teaching in a single-graded classroom.	17	2.94	.74	82.4
4. Schools should offer both multiage and single-graded instruction within their school so parents have a choice of what environment works best for their child.	19	2.89	.93	75.7
5. There is more frequent communication between teachers and parents of children in a multiage classroom than teachers and parents of children in a single-graded classroom.	20	2.76	.66	64.7
6. Instructional planning for the multiage classroom will take more time than the instructional planning in the single-graded classroom.	20	2.75	.71	60.0
7. Parents of children in a multiage classroom volunteer more frequently than parents of children in a single-graded classroom.	17	2.70	.68	58.8
8. Multiage instruction works best if teachers are able to team teach.	19	2.68	.94	47.4
9. The best combination of grades is K-1-2 and 3-4-5.	18	2.61	84	50.0
10. The issues that a teacher will encounter in a multiage classroom are the same issues that a teacher would encounter in a single-graded classroom.	20	2.60	.68	50.0
11. Teachers should be the ones who decide if a school offers or transitions to multiage instructional practices.	17	2.58	.71	47.1
12. The issues administrators managing a multiage system deal with are no different than the issues an administrator managing a single-graded system deals with.	19	2.52	.61	57.9
13. In a multiage classroom, ideally you should have an equal number of every age you serve, for example six 5-year olds, six 6-year olds, and six 7-year olds.	18	2.44	.51	44.4
14. There are some school settings in which multiage instruction would not work.	20	2.30	.92	40.0
15. The biggest obstacle implementing multiage instruction is *No Child Left Behind* regulation.	20	2.30	.57	25.0
16. In school settings offering both multiage and single-graded options, teachers of single-graded classrooms are always supportive of the multiage classroom.	18	2.26	1.04	27.8
17. In a multiage classroom, the age of the child should determine his or her readiness to move on.	19	2.25	.71	30.0
18. Administering and tracking standardized tests is a challenge for multiage settings because of the grade designations for testing.	20	2.25	.71	30.0
19. The curriculum resources needed to teach in a multiage classroom are the same as the curriculum resources needed to teach in a graded classroom.	20	2.01	.64	15.0

percentage fell short at 72.20 (Appendix L). Statements two and three also came very close to consensus, but in the end felt short in either the mean score or the percentage of agreement. Statement two, *in multiage school settings where both single-graded and multiage options are offered, all teachers should be trained in the multiage strategies,* was responded to by 19 panelists. Statement two is one of the two construct three items (training and resources) that was a non-consensus item. With 78.9% agreement with this statement (Appendix L), it fell short of the required 80%, and the mean score fell just short as well with 2.94 and a standard deviation of .74 (Table 14). Statement three, *there is no difference between the classroom space needed for teaching in a multiage classroom and the space needed for teaching in a single-graded classroom,* was responded to by 17 experts. The mean score was 2.94, the standard deviation was .74 (Table 14), and the percentage of agreement with this statement was 82.35 (Appendix L). This question was new in Round Two; however, it was just a slight revision to a question that was eliminated after Round One, *the ideal square footage needed for teaching in a multiage classroom is the same as the ideal square footage needed for teaching in a single-graded classroom.* The feedback on the Round One version of that question was that there was no way to measure or qualify "ideal" space for either classroom model.

Statement four, *schools should offer both multiage and single-graded instruction within their school so parents have a choice of what environment works best for their child,* was responded to by 19 panelists. Of the experts, 73.6% agreed with this statement (Appendix L), with a mean score of 2.89 and a standard deviation of .93 (Table 14).

Statement five, *there is more frequent communication between teachers and parents of children in a multiage classroom than teachers and parents in a single-graded classroom,* was a new statement, introduced in Round Two. The Round One version of this statement read, *the teacher/parent partnership and contact with parents in a multiage classroom versus a single-graded setting is basically the same.* Feedback from the panelists was that being the "same" was not measureable and nor does it identify "what" it is one is measuring, so therefore it was removed and in exchange, statement five and statement seven (both non-consensus items) were added to Round Two, to gain more insight into parent involvement. Statement five was responded to by 20 expert panelists, and 64.7 of the respondents agreed with that statement (Appendix L). The mean for this statement was 2.76, and the standard deviation was .66 (Table 14). Twenty panelists responded to statement six, *instructional planning for the multiage classroom will take more time than the instructional planning for the single-graded classroom,* with 60% agreeing with this statement (Appendix L). The mean score for statement six was a 2.75, and the standard deviation was .71 (Table 14).

Just 17 of the 20 panelists responded to statement seven, *parents of children in a multiage classroom volunteer more frequently than parents of children in a single-graded classroom,* with 58.8% agreeing with that statement (Appendix L). The mean for this statement was 2.70 and the standard deviation was .68 (Table 14). This was also a new question in Round Two, which provided more specific data about parent involvement. It was one of the two statements that were added (along with statement five) to replace the statement that was removed in Round One, *the teacher/parent*

partnership and contact with parents in a multiage classroom versus a single-graded setting is basically the same. That statement from Round One was thrown out because it was non-specific; "*the same*" could not be defined.

Statement eight, *multiage instruction works best if teachers are able to team teach,* was responded to by 19 panelists, with 47.4% agreeing with this statement (Appendix L). The mean score for statement eight was 2.68, and the standard deviation was .94 (Table 14).

There was no consensus for statement nine; *the best combination of grades is K-1-2 and 3-4-5.* While 18 experts responded to this statement, only 50% agreed (Appendix L). The mean score was 2.61, and the standard deviation was .84. Similarly, 50% of the 20 respondents agreed/disagreed with statement 10, the *issues that a teacher will encounter in a multiage classroom are the same issues that a teacher would deal with in a single-graded classroom.* The mean score for statement 10 was 2.60, and the standard deviation was .68 (Table 14). Another statement from construct one, teacher challenges and strategies, statement 11, *teachers should be the ones who decide if a school offers or transitions to multiage instruction practices,* was supported by only 47% of the 17 respondents (Appendix L). The mean score for this statement was 2.58 with standard deviation of .71 (Table 14).

Statement 12, *the issues administrators managing a multiage system deal with are no different than the issues that an administrator managing a single-graded system deals with,* is a non-consensus statement from construct two, schools/students pros and cons. Nineteen experts responded, with 57.9% agreeing with this statement (Appendix L). Due to the fact that only seven of the 19 experts have had

administrative experience in a multiage setting, many of the respondents felt uncertain of their knowledge in that area. The mean score for this statement was 2.52, and the standard deviation was .61 (Table 14).

Statement 13 changed slightly from Round One to Round Two. In Round One the statement read, *in a multiage classroom, you should have an equal number of every age you serve; for example, six 5-year olds, six 6-year olds, and six 7-year olds.* Based on feedback from the respondents, the word "ideally" was added to the statement in Round Two so that it now read, *in a multiage classroom, ideally you should have an equal number of every age you serve; for example six 5-year olds, six 6-year olds, and six 7-year olds.* This statement was responded to by 18 panelists, with just 44.4% agreeing with that statement (Appendix L). The mean score for this statement was 2.44 and the standard deviation was .51 (Table 14).

Statement 14, *the biggest obstacle to implementing multiage instruction is No Child Left Behind regulation,* is one of the two non-consensus statements from construct two, school/student pros and cons. Twenty respondents addressed this statement with only 25% agreement (Appendix L). The mean score for statement fourteen was 2.30, and the standard deviation was .57 (Table 14).

Statements 15, 16, 17, and 18 are all non-consensus statements from construct one, teacher challenges and strategies. Just 40% of the 20 respondents agreed with statement 15, *there are some school settings where multiage instruction would not work (*Appendix L). The mean score was 2.30, and the standard deviation was .92 (Table 14). Statement 16, *in a multiage classroom, the age of the child should determine his/her readiness to move on,* was responded to by 19 panelists. The mean

score for this statement was 2.26, and the standard deviation was .73 (Table 14), with just 21% agreement with this statement (Appendix L). In statement 17, *in school settings that offer both multiage and single-graded options, teachers are always supportive of the multiage option,* there was a mean score of 2.26 and a standard deviation of 1.04 (Table 14). Of the 18 experts who responded to this statement, 27.8 agreed with this statement (Appendix L). Twenty panelists responded to statement 18, *administering and tracking standardized tests is a challenge for multiage settings because of the grade designations for testing,* with 30% agreement (Appendix L) with this statement. The mean score was 2.25, and the standard deviation was .71 (Table 14).

Statement 19, *the curriculum resources needed to teach in a multiage classroom are the same as the curriculum resources needed to teach in a graded system,* nearly reached consensus to disagree in Round Three. Disagreement with this statement reached 85% (Appendix L); however, the mean score was 2.1 (less than 2.0 is required). The standard deviation for statement 19 was .64 (Table 14). Statement 19 was one of the two non-consensus items from construct three, training and resources.

Findings from Revisions and Additions Made in Round Two

Survey question added. In Round Three the panelists were asked to select what they thought the" ideal" class size for a multiage classroom might be. Their choices were 18-19; 20-21; 22-23; 24-25, or no judgment. Twenty panelists responded to this question. Twelve of the 20 (60%) choose 18-19, two panelists

(10%) choose 20-21, four panelists (20%) chose 22-23, one panelist (5%) chose 24-25, and one panelist (5%) selected no judgment.

New question formed from panelist feedback. In Round One, one of the statements offered in the first construct area, teacher challenges and strategies, was *teaching in a multiage classroom presents more challenges for the teacher than teaching in a single-graded classroom.* Due to the panelists' feedback that the challenges were just different, not greater, that question was removed and the statement was re-presented in Round Two as an open-ended question. The question presented was *list and describe two challenges that a teacher in a multiage classroom would encounter that a single-grade teacher would not.* The summary of responses to that question can be found in Table 15.

Table 15. Challenges that a teacher in a multiage classroom has that a single-grade teacher would not

Open-Ended Question Responses
Parents not understanding how multiage programs work.
Working with administration or other teachers who do not understand the philosophy or who do not value the practice.
Lack of training or support for teachers.
Following the district-adopted timetables and sequence for learning.
Organizing and recording data to track individual student progress.
Explaining a topic in a way that students of different ages and abilities can understand.
Preparing a schedule that makes the best use of time for all.
Collecting and organizing work and anecdotal records for each child so you are addressing their needs.
Competitiveness of siblings in the same classroom.
Creating multiage benchmarks in math.
Explaining grading practices to parents.
Setting up the environment to support a wide variety of children.
Differentiating the lessons plans for each child.

New question formed from consensus statement in construct three.

Consensus was obtained in Round One for the statement; *in multiage school settings, parents should be offered a training and orientation meeting every school year to help them understand multiage practices*, in Round One. The mean score was 3.35, the standard deviation was .67, and 90% agreed with this statement (Table 12). The question was therefore removed from Round Two; however, to find out more about what to include in the training, a new open-ended question was introduced in Round Two. Panelists were asked to briefly describe what information should be shared in a multiage orientation meeting for parents. The responses to that question are summarized in Table 16.

Table 16. What information should be shared in a multiage orientation meeting for parents?

Open-Ended Question Responses
An introduction to the history and philosophy behind the multiage model of instruction.
The research results on multiage instruction.
A review of what a typical day would look like for students.
A discussion of what assessment will look like and how students will be "graded."
How the state standards will be addressed.
The benefits of multiage to each age group.
The benefit of being mentored and being the mentor.
The benefits of being with one teacher for multiple years.
How parents can be involved as a volunteer.
The teaching strategies and the advantages of learning through play.
The classroom environment and how it supports children's ownership in learning.

New open-ended question added to seek more information on construct one. In an attempt to obtain more information from the expert panelists about the strategies that might be unique to multiage classrooms, the following open-ended question was added in Round Two: *List and describe two teaching strategies that you*

would see used in a multiage classroom that you might not see used in a "traditional" classroom. The summary of the responses that question can be found in Table 17.

Table 17. List strategies that might be used in a multiage classroom but not a "traditional" classroom

Open-Ended Question Responses
Shared Book/Poem and Shared Math. Both strategies have multiple teaching points from simple to complex so children can pick out what they understand.
Differentiated instruction by school readiness, developmental level, and interest levels.
Interdisciplinary thematic instruction —Teachers allow students to explore real-life themes of interest that resonate across curriculum (subject area) boundaries. Such authentic instruction (often explored through group projects and group work rather than individually in isolated sets) makes learning more relative to students' lives.
More student choice in their reading material, writing topics, and research projects.
More peer coaching. Children become "teachers" and enjoy helping others.
Designing open-ended assignments *[sic]*where students of various learning levels can practice and demonstrate knowledge at different levels.
Literacy centers based around a theme, including an art center, a big book center, a social studies center, dramatic play center, a writing center, a computer center, and science center. While the teacher is doing guided reading with small groups of children, the other children can choose from a variety of literacy centers.
More hands-on experiences, such as students researching what they want to learn about a topic.
Allow the student to discover information, rather than telling or teaching them facts.
Open student inquiry: a student-centered dialogue-rich environment.
Teaching the strategies of independent/small group/responsible learning so that the classroom ceased to be solely centered on the teacher.
Engaging the older with the younger-entering students in a mentoring program.

New open-ended questions added in construct two on two consensus items. In construct two, school/student pros and cons, there were two statements that did reach consensus to agree in Round One, *in general, children will do better academically in a multiage classroom versus a single-graded classroom,* reached consensus with 88.2 % agreeing with that statement, a mean score of 3.47, and a standard deviation of .72 (Table 10). In addition the statement, *in general, elementary children will do better in a multiage classroom versus a single-graded classroom,* reached consensus with 95.2 agreement with that statement, a mean score of 3.57, and a standard deviation of .75 (Table 10). These questions were removed from the Round Two Likert scale survey; however, the questions were re-introduced in an open-ended format as follows: *Participants in this study tend to agree that children are likely to do better academically in a multiage setting over a single-graded classroom; explain why you think that might be so,* and *participants in this study tend to agree that children are likely to do better socially in a multiage setting over a single-graded classroom; explain why you think that may be true.* The panelists' summary of comments can be found in Tables 18 and Table 19.

Strong consensus was reached in Round One on two statements in construct two, school/student pros and cons. The statement, *it is beneficial to the student when they have the same classroom teacher for more than one year,* and the statement, *it is beneficial to the teacher when a child is enrolled in their classroom for more than one year,* both reached consensus with 100% agreement, an identical mean score of 3.76, and a standard deviation of .44 (Table 10). Due to the strong consensus for these

statements, there was a curiosity about how a mismatch of teacher and student would be handled; therefore, an open-ended question to address that concern was inserted in Round Two, which read as follows: *Since children in a multiage setting tend to stay with the same teacher for two or three years, explain what action should take place if the teacher and the child are not a good "fit."* The summary of the comments by the expert panelists to this question can be found in Table 20.

Table 18. Explain why you perceive that children will do as well or better academically in a multiage setting over a single-graded classroom

Open-Ended Question Responses
Multiage is a child-centered approach. The curriculum is simply a guide.
Children are involved in the process of learning; they learn to read, write, problem solve and socialize within the context of real-life situations. Learning is authentic.
The cross-age learning component is very powerful. Mixed ages capitalize on cognitive conflict, which spurs learning and understanding.
Learning is social. Mixed-aged children learn informally with children of varying points of view.
Being "experts" on this topic implies that we have been exposed to the research on this topic. As such, we should all know that research shows that students in multiage classrooms tend to perform as well as (but not necessarily better than) their peers in single-graded classrooms.
The focus is on the individual needs and the individual student's growth. Although children are allowed to progress at their own rate, they are exposed to higher learning.
There is less competition and more cooperation in a multiage classroom. This promotes confidence and motivation.
Instruction is differentiated.
Because they are invested in their own learning, they choose to learn.
Teachers and students get to know each other well and there is the least possible learning time lost in the transition from one year to the next.
There is greater freedom to take risks and less chance to feel failure.
Students tend to do better because they are constantly assessed and taught at their own level.
There is a comfort level in the classroom, much like the feeling of "family."
Instructional practices focus on success according to the children's patterns of growth and development.

Table 19. Explain why you perceive that children are likely to be better socially in a multiage setting over a single-graded classroom

Open-Ended Question Responses
Children see themselves as fitting in. Everyone is different which is heightened with mixed ages. This leads to less or no competition and more cooperation.
Research shows that younger children reach out to older children and vice versa.
Research shows that children are more prosocial in a multiage environment and they tend to each other and support each other.
Mixed ages give every child a chance to be the youngest, middle, and oldest child. Throughout the years, every child has an opportunity for leadership.
As "experts" in this field, we know that research overwhelmingly shows that students in multiage classroom have better self-esteem and a better attitude about school than their peers in same-age classrooms.
Younger students see role models in older students. Older students feel important as they mentor and help younger students. It is a more natural, family-like setting.
Learning centers that incorporate dramatic and creative thinking, give children ample opportunities to interact with peers to develop social skills like sharing, cooperating, compromising, being a leader, and solving conflicts.
Multiage philosophy promotes social interaction and learning from others.
Prosocial behaviors are taught and encouraged. Classroom communities are established, nurtured, and celebrated.
I don't know that this statement is inherently true; however, children do have a more naturalistic experience in a multiage classroom, and it only follows that with many ages interacting together, there will be more social diversity and opportunity for growth.

Table 20. Since children in a multiage setting tend to stay with the same teacher for multiple years, explain what action should take place if the teacher and the child are not a good "fit."

Open-Ended Question Responses
Since multiage is child-centered, the probability of child/teacher to not be a good fit is minimal. Oftentimes the good fit is really between a parent's philosophy of what education should be in contrast to what multiage education really is. If the child is in the middle of a philosophical conflict, the child should stay with the parent, where there is a lifelong commitment.
In a child-centered approach, the child's welfare is top priority, so no matter what the reason for the "not a good fit," teachers find ways to accommodate the child's needs which may mean moving the child to another multiage setting or to a single-graded classroom.
In the case of a single homeroom multiage instructor, a change may be in order at the end of the school year. In the case of team-taught multiage class, one case of "poor fit" may not justify the move. Team teaching gives you more options for dealing with the "misfit."

Table 20 (continued)

The teacher needs encouragement and coaching by the principal to try to overcome difficulties with a child, but if that doesn't work, then the child may need to be moved to a different setting.
Every classroom has difficult students; having a child for more than one year can actually help the relationship develop so that the teacher gets to know what the underlying issues [are], which results in improved behavior and increased academic performance.
A multiage teacher should be open to all types of learning and children and be able to integrate them into the classroom.
Change teachers with input from the teacher and the parents in a way that doesn't "blame" the teacher or the child involved.
Teachers and parents should try to work things out. Sometimes good communication or small changes can help to resolve the problem. If not, move the child if you can.
It may be that it is the teacher who is not a good "fit" to multiage instruction. The whole philosophy of multiage instruction is respect and appreciation for the whole child, challenges and all. A poor "fit" would be a very rare occasion.
If there is a conflict, personality, class, or other difficulties that are unable to be rectified through discussion and mediation, a school counselor can come in to offer suggestions or counsel. If the difficulty cannot be rectified, then a classroom transfer may be the best course of action.

New question added on consensus to disagree statement in construct three. In Round One, in construct three, training and resources, 100% of the panelists disagreed with the statement, *teachers who work in a multiage setting require no special training* with a mean score of 1.3, and standard deviation of .47 (See Table 13). Since training was identified as a need, an open-ended question was added to Round Two, *describe the training needed to adequately prepare a teacher to teach in a multiage setting.* A summary of the comments can be found in Table 21.

Another new question added to consensus to disagree statement, construct three.

Table 21. Describe the training needed to adequately prepare a teacher to teach in a multiage setting

Open-Ended Question Responses
Training in multiage strategies for both whole group and small group interaction.
How to set up a learning environment through centers and projects.
How to assess with authentic or performance-based assessments, how to develop portfolios, and how to see a child on their [*sic*] own continuum of learning.
Training in cross-age learning is important.
A strong background in the constructivist approach and social learning theory.
An introduction to the history and the philosophy of multiage instruction.
Training in the use of cooperative learning strategies.
Training in differentiated instruction.
Training in thematic instruction with interdisciplinary connections.
Teachers should observe good multiage instruction in practice with a debriefing dialogue.
The Multiage Institute at Northern Arizona University was a good start, but follow-up support and ongoing classes and discussions are recommended.
A strong background in child development, literacy, and math is important.
Teachers need to be trained in what centers really are and how to implement them.
A library of good resource books and journal articles on the topic is very important.
Following training, four weeks of interning and/or observing in a multiage setting.
The scope and sequence standards required of the grade levels they will teach.
Training on how to help children create for themselves responsible learning patterns.

In construct three, training and resources, the statement, *universities across the United States do an adequate job of preparing future teachers for the*

possibility of teaching in a multiage environment, 94.1% reached consensus to disagree in Round One of the survey, with a mean of 1.71 and a standard deviation of .59. Identifying a need for training, an open-ended question was added to Round Two, *what training could universities provide that would help to prepare the multiage and single-graded teacher.* A summary of remarks can be found in Table 22.

Table 22. What training could universities provide to prepare the multiage and traditional teacher?

Open-Ended Question Responses
A child-centered approach rather than a curriculum-centered approach to learning.
Solid child development coursework, authentic assessment, integrated curriculum approach, and how to set up learning environments with centers and projects.
Training on cooperative learning strategies and developing a classroom community.
Training on differentiated instruction.
Training on the use of thematic instruction with interdisciplinary connections.
How to provide instruction in flexible groupings.
How to collect data on student growth using authentic assessment.
Universities should provide training on multiage strategies.
The advantages of learning through play, inquiry-based learning, and constructivism.
Instruction on writing, integrated thematic instruction, conferencing with students, formative and summative assessment, addressing social/emotional needs.
Training in Responsive Classroom (Northeast Foundation, Green, MA) is helpful.
A library of books and good journal articles supporting best practices.
School visits to sites where multiage strategies are being utilized.
Classes stressing cross-age learning and prosocial behaviors.
Montessori training is a good start.

Another new open-ended question in construct three. In construct three, training and resources, consensus to agree was formed in Round One on the

statement, *it is difficult to find regular training and conference experiences geared for elementary teachers who work in multiage classrooms.* Table 23 shows participant responses regarding training and conference resources.

Table 23. Describe what you would ideally like to see for training and conferences geared for multiage personnel

Open-Ended Question Responses
Training on the history and philosophy of multiage education.
A conference with breakout sessions that appeal to a variety of different levels and experiences and breakout sessions for music, art, and physical education teachers as well.
A conference or training in an area where teachers could observe at a multiage site with time to debrief following the observation.
Training should include research by Vygotsky on the zone of proximal development, steps for how to implement an MA program, and best practices for individualizing instruction.
Training should include ideas for parent communication, examples of daily schedules, ideas for organizing the environment and the classroom materials, and methods of assessing and measuring student growth.
More opportunities for dialogue with fellow multiage teachers.
More training for older elementary and middle school multiage instruction.
Show videos of good multiage instruction in practice.
It would be great to network and collaborate with teachers across the globe on planning, parent support, assessment, and integrating units.
Find teachers in an area who are presently doing multiage education who could regularly meet and become a regional core group to provide training or consultation to others.
Administrators, teachers, and university professionals co-presenting together.
Summer institutes for three to five days would be ideal.
Training would be best to focus on the multiage best-practice strategies that can work in all classrooms and then you will draw in a larger pool of teachers.

The mean score was 3.20, the standard deviation was .86, and 84.2% of the panelists agreed with this statement (Table 12). This question was removed from the Likert

scale survey in Round Two; however, more information was desired regarding the type of training experiences

New question added in construct three on textbooks. In Round One, construct three, training and resources, the statement, *textbooks are designed well for use in multiage setting,* received consensus to disagree with 85% disagreement, a mean score of 1.6, and a standard deviation of .75 (Table 13). To explore how textbooks could better meet the needs of multiage teachers, the following open-ended question was added to Round Two: *How could textbooks be better designed to meet the needs of teachers in multiage classrooms?*

Table 24. How could textbooks be better designed to meet the needs of teachers in multiage classrooms?

Open-ended Question Responses
Textbook companies could design learning modules that would give flexibility to multiage teachers. Modules would provide for various reading levels, interests, and needs.
Textbooks could be organized around themes of relevance to students' lives with more suggestions for group work.
Textbooks could offer a variety of activities (around different developmental levels) to help teachers with suggestions for differentiating their instruction.
They need to include a much broader spectrum of choices for children and for teachers. There should be choice of reading material (at different levels), opportunities for authentic writing experiences, and methods to learn material (such as research and interviewing).
It would be helpful if textbooks would incorporate/integrate ranges of developmental learning of their material with stages from novice to expert.

Similar comments made by different panelists were jointly summarized so the number of respondents and the number of responses do not align.

Brief Summary of the Delphi Survey Findings

In construct one, teacher strategies and challenges, seven statements met consensus to agree, and two statements met consensus to disagree. Three questions from construct one were revised because of feedback from panelists and the researcher's observations. These statements were then re-presented in an open-ended format for more specific information relating to the content of the statements. In construct two, school/student pros and cons, six statements reached consensus to agree and six statements met consensus to disagree. Three consensus questions were reintroduced in an open-ended format to search for more detail in the responses given. In construct three, training and resources, six statements reached consensus to agree and four statements reached consensus to disagree. Five consensus questions were re-introduced in an open-ended format to further explore the information gathered. Nineteen questions, which spanned all three constructs, failed to reach consensus among the expert panelists in this study.

CHAPTER 5. DISCUSSION AND CONCLUSIONS

Chapter five provides a summary of the consensus to agree and consensus to disagree statements from all three constructs. It contains a discussion of each construct area, which is based on a summary of the language and themes that emerged from the panelists' remarks, and a visual model of the expert findings related to the three key construct areas. This is followed by suggestions for future research in this area.

Summary

The graded school system, according to Goodlad and Anderson (1963), was driven by a need for managing large number of students rather than meeting individual student's needs. Stone (2004) described today's graded school as more curriculum driven than child focused. Since the transition came about more as a convenience for teachers rather than because of proven positive outcomes for students, several developments emerged to challenge the graded system during the close of the 19th and early 20th centuries. The negative impact of retention (Frey, 2005) and the attention to meeting the needs of every student shifted the educational focus to strategies that were actually proven practices from the past, one of which was multiage instruction. Studies comparing students' academic achievement found mixed results, but studies comparing the social benefits to children were more positive for students receiving instruction in the nongraded classroom (Anderson & Pavan, 1993). Research journals and resource publications also were very clear that multiage instruction required unique strategies plus initial and ongoing training in order for multiage instruction to be successful (Gaustad, 1992a). The purpose of this

study, therefore, was to explore the practices of multiage instruction with experts who have best practice knowledge or practitioner expertise in the multiage classroom. The probing of the key research questions was intended to provide a foundation of the key differences between traditional and multiage instruction so that those who research this area will measure only the outcomes of students who truly have been engaged in the multiage experience, and not merely a combining of ages and grades. Furthermore, this study was conducted so that the information gathered regarding training, strategies, outcomes, and challenges might serve to stimulate those who are establishing or making the transition to multiage instruction.

A three-round Delphi method was chosen as the research procedure to gather information from 21 theory and practitioner multiage experts from across the United States. Expert panelists were required to meet set criteria to participate, including years of experience and knowledge of multiage best practices. Fifty-five statements were developed around the four key research questions (three constructs) in this study to further understand multiage strategies and challenges, pros and cons to students, and the training and resources needed to support multiage practices. Although two pools of experts were secured for this study, practitioner experts and theory experts, all consensus data were summarized in one report. A four-point Likert scale was established with the options coded as follows: *strongly disagree* = 1, *disagree* = 2, *agree* = 3, and *strongly agree* = 4, and *no judgment* coded to null. To determine consensus on each statement, means, standard deviations, and a percentage of agreement were utilized. A mean of > 3.00 with a standard deviation of < 1.00 and an agreement percentage of 80% or higher indicated consensus to agree. A mean of

< 2.00 with a standard deviation of < 1.00 and a disagreement percentage of 80% or higher indicated consensus to disagree. The decision for consensus was determined by following the criteria in the guidelines for Delphi Survey research (Hasson, Keeney, & McKenna, 2000). Table 25 displays a summary of the consensus and non-consensus items for each construct area, and the discussion, which follows addresses the consensus areas in each construct. Figures 1, 2, and 3 identify significant findings from the study. Appendix M displays which research questions each statement in the survey helps to answer.

Table 25. Table of consensus and non-consensus items in the three construct areas

Constructs	Consensus to agree statements	Consensus to disagree statements
1. Multiage teacher strategies and challenges	Multiage instruction is a credible practice Only teachers willing to teach in a multiage setting should teach The Board of Education in each state should work to expand multiage instruction Multiage teachers are more likely to teach to the individual ability level of each child Parents of children in multiage settings are generally excited about the practice The process of flexible grouping is more prevalent in multiage classrooms If a child starts out in a multiage setting, it would be best for them to continue through elementary years in a multiage setting	There is no difference in how classroom space is arranged in a multiage classroom verses a graded classroom The number of students in a multiage classroom should be less than the number of students in a graded classroom, because it is harder to manage the varied needs of children in a multiage setting

Table 25 (continued)

2.	Pros & cons for children in a multiage setting	Elementary children tend to get along better, nurture, mentor and act more like family in multiage classrooms It is beneficial to the student when they have the same teacher for more than one year It is beneficial to the teacher when they have the same student for more than one year Multiage classrooms are less stressful In general, children do better socially in a multiage setting In general, children do better academically in a multiage setting	ELL students would perform better socially and academically in a graded classroom Children in the low-normal range would perform better socially and academically in a graded classroom Gifted students would perform better socially and academically in a graded classroom Children with Individual Education Plans would perform better socially and academically in a graded classroom Children with behavioral problems would perform better socially and academically in a graded classroom Average students would perform better socially and academically in a graded classroom
3.	Training and resources needed in a multiage setting	Teachers should visit another multiage setting before teaching in their own multiage classroom Principals & superintendents should have multiage training if they administer in a multiage setting School boards of MA schools should be offered MA training on its rationale or history Parents should be offered an orientation meeting every year to help them understand MA practices It is difficult to find regular training and conference experiences geared for teachers in a multiage setting	Teachers who work in a multiage setting require no special training Once teachers receive an initial orientation to multiage classroom practices, no further training or support is needed Textbooks are well designed for use in multiage settings Universities across the United States do an adequate job of preparing future teachers for the possibility of teaching in a multiage classroom

Discussion and Conclusions in Relation to Research Questions

Multiage instruction is seen as a viable practice for those who are seeking a more effective way to meet individual needs, develop leadership and problem-solving skills in children, and instill excitement about learning (Pavan, 1992; Stone, 2004).

However, to achieve these outcomes, multiage instruction is best left in the hands of those who truly are willing to learn and implement the strategies. Although some parents may be reluctant to consider the multiage classroom, if given the option, when parents have had time to understand and observe the multiage philosophy, they are generally excited about the practice, and are more likely to become active partners in the education of their child (Davis, 1992; Stone, 2004). This may be attributed to the fact that multiage teachers are more likely to teach to the individual ability level of each child, and therefore children will be happier and more successful as a student. According to Lloyd (1999), research affirms student happiness to be true. The process of grouping and regrouping children for instruction according to their performance level ensures that a child's developmental rate is respected, allowing for learning to take place in a supportive and stress-free environment. While educational trends have come and gone over the years, multiage instruction has a history as a proven developmentally-appropriate practice for young children, with the greatest impact seen in children who have had multiple years in the model. According to Elkind (1989) and Pavan (1992), the longer students experienced the nongraded system, the more positive their school attitudes and academic performance. Research studies have substantiated that multiage children compare academically and are slightly more skilled socially than children in graded classrooms; however, many of these studies acknowledged that the training of staff in the multiage philosophy and the teachers' use of multiage strategies could not always be confirmed. Future research studies on the impact of multiage instruction on children should look to the experts and measure only the outcomes of those multiage programs that truly follow identified practices.

Working in a Multiage Classroom

Stone (2004) affirmed the findings of the expert panelists that the multiage philosophy is a child-focused, not a curriculum- or "standards-" focused model. Because the multiage model is child-focused, it calls for specific uses of classroom space as well as instructional strategies that support each child's success in the classroom. Although these multiage strategies should be taught and utilized by teachers in order to fairly measure accurate outcomes for children in a multiage setting, most of the multiage strategies can also be adopted and effectively used by the graded classroom teacher as well. Even though students in the graded system will move on rather than stay with their teacher for two or more years, graded classroom teachers may want to consider utilizing multiage strategies because it is these strategies that tend to contribute to enhanced prosocial behaviors in children, improved attitudes towards school, and more positive and confident students. The multiage classroom strategies that can be effectively used by both graded and non-graded classrooms that emerged from the study are identified in Figure 1.

Tables rather than desks are often the first difference noted in the nongraded- versus graded-environment. Gaustad (1992c) found that tables are necessary because learning is a "cooperative" process in the multiage setting. Multiage teachers do not teach to the whole class and then ask students to work independently on their assignments, which is more common in graded classrooms. Students are frequently grouped to work on tasks with others who are similar or varied in ability levels. Children are encouraged to help each other in the learning process, which instills

leadership and nurturing qualities in children. The groups are flexible and change frequently, according to the students' interests and abilities, not their grade level.

Differentiated instruction is a common practice in classrooms; however, there are distinct differences between the two models. In the graded classroom, differentiation means taking the same lesson and trying to find a way to make it work for each student. In the nongraded classroom, differentiation means that the teacher creates appropriate lessons that suit the needs of each lesson, and does not necessarily teach the same thing to all students. A developmentally-appropriate classroom may plan to offer both variations of differentiation.

Learning centers/project areas are another multiage strategy that can easily be adapted to the graded classroom. Because instruction in the multiage classroom is geared to small groups of children rather than the class as a whole (Davis, 1992), learning centers and project areas are available to students who learn to work independently on tasks and in projects designed to address a wide range of interests and ability levels. Students have the freedom to choose their work stations and are not assigned to activities, which must be completed each day. They approach their options with a natural curiosity and enthusiasm. While students are engaged in the activities that they freely choose, teachers are able to collect authentic representations of their work. The work samples collected from students' centers as well as their instruction time comprises the naturalistic products of their work, which becomes their portfolio. Data from this portfolio assessment become the basis for lesson planning in the classroom, not the grade level curriculum book or state or national standards. That is why the multiage model is considered "child-" rather than

"curriculum-" centered. Stone (2010) described the child-centered approach as fitting the school to the children. Although multiage classrooms must comply with *No Child Left Behind* assessment mandates, standardized testing is not compatible with the philosophy of child "centeredness" and a stress-free environment, and if it were not for the mandate, standardized tests would serve no purpose in the multiage setting. In spite of the need to assess children, the graded system can find a similar success with the use of learning centers and project areas, empowering children to make choices and construct their own knowledge.

Two other key strategies of multiage instruction that can effectively be used in graded classrooms as well are inquiry-based learning and thematic instruction. Dewey (1916/1966) supported an inquiry-based learning environment, in which students have the freedom to research what they want to learn as opposed to learning what the teacher or the textbook thinks is important. When responding to the interest areas of students, teachers allow students to explore real-life themes of interest that can resonate across all subject areas. This makes learning more relevant to students' lives. A skilled teacher can use these child-centered approaches while not losing sight of the benchmarks that might be assessed in the standardized tests with which most schools must comply. Many graded classrooms remain fixated on quiet individual work within and outside of the classroom which can prove challenging for the hands-on, active learning of young children.

Challenges

Multiage instruction has proven benefits for students. It can effectively work within the same spatial dimensions as the graded classroom and is widely accepted by

parents who have experienced this model. It utilizes strategies that can easily be learned and adapted by all teachers. Nonetheless, there is still unlikely to be a conversion to multi-age instruction in the near future. This may be because of the challenges encountered in the multiage setting. Those challenges for students, teachers, and administration are summarized in Table 26. For the child, addressing the possibility of a "misfit" between the teacher and the child may require some administrative intervention. Because of the child-focused philosophy of the multiage philosophy, misfits may be a rare occurrence. However, when the problem arises, counseling through the issues may help to resolve the difficulties. If all else fails, a change in classroom staff may be necessary. The initial challenge common to teachers and administrators is dealing with the bureaucratic issue of promoting and supporting a classroom model that is unfamiliar to the general population, being firmly grounded in the understanding of the multiage philosophy in order to market the practice to others. The next challenge may be finding the teachers willing to work in a system that at first glance appears more complex and labor intensive than the graded system. Standardized testing, a lack of training opportunities, and textbooks that fail to meet the needs of multiage teachers are additional challenges which staff must willing to address. Perhaps the biggest challenge that schools might face is the State Board of Education's failure to recognize and support the multiage model. Without support for the teachers, parents, and administrations who are interested in or already using multiage models of instruction, federal mandates, assessments, and lack of resources will make it challenging to continue the practice.

Graded Strategies	Multiage Strategies
Room arrangement using tables not desks to support cooperative learning	
Flexible grouping for all subjects during instruction time; children are grouped and regrouped according to their ability	
Differentiating the curriculum for each child's ability level	
Cooperative learning strategies	
The classroom is set up with learning centers and project areas	
The use of authentic/portfolio assessment	
Inquiry based learning	
Thematic Instruction	
Curriculum focuses on child's abilities and interests	

Figure 1. Construct One: Expert panelists' responses on best practice strategies.

Table 26. Challenges encountered working in a multiage setting

Challenges for the child	Challenges for the teachers	Challenges for administration
Handling the rare possibility that there may not be a good "fit" between teacher & child	Parents not understanding how multiage programs work	Dealing with the bureaucratic issues to offer and market a model that is less familiar to parents
If a child has years in a multiage setting, some may have difficulty adjusting to the "graded" setting	Working with administrators or other teachers who do not understand the philosophy of the multiage practice	Having the commitment to study and to apply research to implement a more natural way of learning for children
	Lack of training and support	Locating and providing initial and ongoing support for teachers and parents
	Following district timetables for learning & testing	Managing the possible confusion and conflict when both program models are offered within a building
	Explaining a topic in a way that students of different ages can understand	Creating a climate where different approaches are accepted and encouraged
	Preparing a schedule that meets everyone's needs	Securing adequate teaching resources
	Collecting and recording anecdotal records, in order to plan for everyone's needs	Managing the administration and tracking of standardized tests which is not in sync with this model
	Explaining grading practices to parents	Securing the teachers who have philosophical buy in and openness to the multiage teaching strategies
	Setting up and constantly revising your environment/centers to support a wide range of abilities	
	Lack of appropriate textbooks and resources	

Outcomes/Benefits for Children Enrolled in a Multiage Classroom

Child-centered strategies are the key to the multiage classroom environment that make this practice appropriate for children of all ability levels and special needs. Children of all abilities spanning the Individual Service Plan (IEP) level (typically 1.5 to 2 standard deviations below the norm) to the gifted and talented range will thrive in the multiage classroom because the well-trained multiage teacher is knowledgeable about setting up the environment and activities to ensure each child's success.

According to Aina (2001) and Kruglik (1993), the wide range of ages and abilities in the multiage classroom greatly reduces the stress and pressures of academic failure. Younger children learn from the positive modeling of older students, and older students develop a sense of pride from the sense of responsibility in modeling and caring for the younger students, which creates a natural internal self-initiative. ELL students and children with behavioral problems also tend to do well in the multiage classroom due to the language-rich, cooperative rather than competitive learning environment, which instills a sense of family. When children spend two to three years together with the same teacher in an environment designed for cooperation and teamwork, students develop a natural sense of nurturing, mentoring, and leadership as they change from being from the youngest to the oldest in the classroom. Teachers who spend multiple years with their class get to know not only the children's abilities, but also their interests, their passions, and their stressors. Therefore, teachers can plan effectively to maximize learning and minimize anxiety. As a result, behavior problems are less likely to occur. Due to the amount of time in the day when children are engaged in activities that they choose, rather than working on teacher-imposed assignments, they are empowered, which minimizes their feeling of failure in the classroom. In addition, there are multiple opportunities to develop characteristics like caring, collaboration, tolerance and respect, all through play and real-life situations. Flexible groupings and daily immersion with peers of various ages also allows students to develop and hone social skills such as problem solving, using empathy, and working cooperatively. Research studies (Fu, 1999; Miller, 1994; and Veenman, 1995) have confirmed that children in multiage classrooms are more likely to have

better self-esteem and a more positive outlook toward school than children who are in single-graded classrooms. Song et al. (2009) concurred that the freedom that a child has to work at his or her own pace instills confidence and a greater likelihood that children will reach their full potential.

In addition to the social benefits achieved through a personalized and cooperative learning environment, because of the extended time together as a class, each student's individual academic needs become more obvious. Teachers estimate about three to five weeks of transition time whenever a child adjusts to a new classroom setting and teacher. In a multiage classroom teachers can pick up where they left off in the spring, eliminating any loss of instructional time in the fall due to that transition. Multiple years with the child also allow for more time to get to know the family, which can prove beneficial to the child as well (Miller, 1994). When children are young, they need a teacher who can work with the parent, following them through the early stages and sequences of formal learning, and who will truly know them as a learner and a developing human being. Without this continuity in the early teacher-learner relationship, children are more vulnerable to regression in the learning process as they adjust each year to the instructional strategies of the various teachers they encounter each school year.

In the multiage classroom, because a child is with the same teacher from two to four years, the possibility of a "misfit" between a child and teacher is possible and may be more cause for concern that if a child moved on to another setting each year, as in the graded model. Since multiage grouping is child-centered, however, the probability of a child/teacher "misfit" is minimal. More often the lack of a good fit is

really between a parent's philosophy of what education should be in contrast to what multiage education really is. In the case of conflict between teacher and child or teacher and parent, administration should work with the teacher and parent team in seeking a suitable option including moving the child to another classroom, or encouragement and counseling through the issues by the principal or school counselor. If a change is warranted, it is important that change takes place in a way that does not blame the teacher, parent, or the child.

With attention to the academic and social needs of each child, the multiage classroom becomes a less stressful setting for elementary students than single-graded classrooms, because every child is on his or her own continuum and is not compared with other children (Lodish, 1992). The environment is much safer for risk taking without the stress of the quiet, sit-down teacher-directed tasks all day, or the pressure of grades relating to tests. The multiage classroom by design offers more active learning, more child-choice time, and presents an enjoyable environment, which is conducive to learning and success for all children. The avoidance of failure in a continuous progress multiage classroom allows children to achieve at their own rate, and over time, will permit them to maintain an eagerness to learn which will benefit their academic learning overall. The benefits and positive outcomes for children in a multiage classroom as summarized by the expert panelists in response to the questions in research question number two can be seen in Figure 2.

Perceived outcomes for students enrolled in a multiage classroom

- Children of all ability levels from IEP students to gifted students can perform as well or better socially and academically in a multiage model
- Children with behavioral problems can perform as well or better socially and academically in a multiage model
- ELL students can perform as well or better socially and academically in a multiage model
- It is beneficial to the student and the teacher when a child is enrolled in a classroom for more than one year
- Multiage classrooms are less stressful for children than single graded classrooms
- Children tend to get along better, nurture, mentor and act more like family in a multiage classroom than in a single graded classroom
- There is more cooperative learning and less competition and conflict in a multiage classsroom verses a single graded classroom
- There is greater opportunity for leadership experiences in a multiage setting
- Students are more confident and more invested in their learning, in a multiage setting

Figure 2. Construct Two: Expert panelists' perceived outcomes for students attending a multiage classroom.

Training and Resources

In preparation for successful multiage instruction, principals, superintendents, school boards, and parents should all have training and an orientation to multiage history and practices. There is some variance in what kind of training best fits each entity, which can be seen in the training model design in Figure 3.

Multiage Training Model

Administration and School Board Training	Parent Training	Teaching Training
• History/philosophy of multiage instruction • Research/benefits of the practice • Teacher support needed • Resources needed	• History/philosophy of multiage instruction • Research/benefits of the practice • Daily routine • How teachers address the standards • Assessment and grading practices • Instructional strategies • Volunteer opportunities	• History/philosophy of multiage instruction • Research/benefits of the practice • Constructivist Theory • Strong foundation in literacy and math • How to set up the environment • Performance based assessment • Cross-age learning • Cooperative learning • Differentiated instruction • Thematic instruction
		Ideal additional trainings:
		• Observation of and/or internship in a multiage classroom • Follow up meetings with trainers

Figure 3. Construct Three: Expert panelists' summary of recommended comprehensive training needed prior to implementing multiage practices.

Following this training model would ensure that teachers are prepared and that students have the opportunity to reach their potential within this system. Without a training plan to orient teachers to the strategies, Lloyd (1999) questioned how studies can accurately measure multiage outcomes. In order for administrators to support and develop a multiage program, they should have a thorough understanding of the philosophy as it will impact the decisions they make regarding class sizes, administration of standardized tests, portfolio assessments, home-school communication, and staff development. Because superintendents are not typically a direct line to teachers and parents, their training is not as imperative, but nevertheless, superintendents should have a good understanding of the philosophy and benefits of multiage instruction. Principals, however, should ideally have the same training as teachers because well-trained principals are necessary to support teachers, advise parents, and guide colleagues. An annual orientation and review for school boards and parents is also recommended. If school boards have an understanding and a positive feeling toward the practice, it will have a "trickle-down" positive effect on the parents. A parent training or orientation is imperative, especially for parents new to multiage instruction. Parents want to know about the why and the how, in these orientations, since the multiage approach may not fit with the systems that they are used to. Aina (2001) reported that one of the common concerns regarding multiage instruction is the parent and community lack of understanding of programs; therefore, an annual orientation is invaluable. The need to continue the orientation may dwindle after a few years, when the parents get to see firsthand the benefits for their children; however, as long as there are parents new to the concept, or families who have an

interest in finding out more about the strategies, annual orientation meetings should be offered. Continuing the orientations and annual meetings increases the chances for support when parents not only understand the practice but also can speak intelligently about its benefits. The orientation meeting for parents should focus on the most relevant content for the age of their child. In the early primary years, an orientation would include an introduction to the history and the philosophy behind the model, research on outcomes and benefits, what happens in a typical classroom day, and how parents can be involved as a volunteer. As the child moves up to older primary ages, the orientation or annual meeting would include more details on how each child's needs are addressed, a discussion on how students will be graded, and how the classroom teacher would address state standards and assessment requirements.

Due to the paradigm shift from the traditional graded model, teacher training is also imperative. Davis (1992) indicated that a lack of teacher training on multiage strategies would surely impact student outcomes, and yet research studies do not always identify how well prepared the teachers must be in order to effectively implement the multiage model. Multiage teaching is complex with principles that translate into concrete, diverse, and flexible teaching strategies. From the setup of the classroom to the establishment of a community of learners, to the delivery of a multi-faceted curriculum, training and time to plan are essential in order for high quality multiage classrooms to emerge. Training should be offered not just for the classroom teacher but for teachers in the specialty areas such as art, physical education, and music as well. Based on the well-rounded knowledge of the entire school campus,

children will reap the most positive outcomes from this practice. Ongoing training is also important, as practices and trends do change over time.

Studies do show that multiage training is the key element of successful outcomes for children (Davis, 1992; Yarborough & Johnson, 2000), and yet as important as this training is, multiage instructional strategies are not naturally embedded in the typical university teacher preparation programs. Neither specialized training nor multiage conferences are abundant. Northern Arizona University's Multiage Institute does provide a good source for beginning and advanced multiage training; however, other options or opportunities are very rare, with the exception of peer sharing amongst schools, districts, or communities. While universities may be reluctant to focus exclusively on multiage teacher preparation since graded instruction is still the dominant practice across the United States, all teachers would benefit from the orientation to the strategies found in Figure 1, because many of the multiage strategies do work as effectively in a graded setting. These multiage strategies can easily and successfully be adapted by traditional classroom teachers if universities begin to provide the tools and rationale for change. In addition to universal instructional strategies for all teachers found in Figure 1, multiage teacher training should include an overview of the philosophy and research on multiage grouping, steps for how to implement multiage instruction including centers and flexible grouping, the use of daily schedules, cross-age learning, and assessing children on progress rather than product. Until multiage training opportunities become more widespread, school districts may need to form linkages with other schools and professional organizations to ensure that multiage teachers are as well prepared as

teachers who serve in the graded classroom. Ideas for ongoing training include a conference with breakout sessions for different age levels and specialty areas (music, physical education, and music); three- to five-day summer institutes; or conferences that are located in areas where part of the training can be observation in multiage classrooms nearby. In addition, ideally, new multiage teachers would have the opportunity to observe an experienced multiage teacher prior to starting their own classroom, or spend two or three weeks working side by side with the experienced teacher. Follow up consultation with the training site or mentor teacher should continue periodically throughout the new teacher's first year to allow teachers time to ask questions, problem solve, and engage in professional conversations with experienced teachers. Viewing positive modeling is a powerful way to develop ideas and reinforce multiage principles. The need for on-going support and monitoring will ensure that teachers move forward through the difficult process of transitioning to this model until they master the concepts and see the benefits firsthand. Administrators would be wise to allow for regular dialogue with other multiage teachers on a regular basis. Once teachers have become masters in understanding multiage philosophy and strategies, then they can share their wisdom with others.

Regarding resources, teachers would benefit from journal articles and a library of resource books on multiage instruction to support and reassure them in their own understanding as well as explaining the rationale and strategies to colleagues and parents. Unfortunately, schools may find a lack of good textbooks and curriculum resources for multiage teachers, a problem identified in multiple studies (Aina, 2001; Davis, 1992) and a problem that still exists today. Textbooks are not designed well

for use in multiage environments, primarily because they are curriculum-centered, not child- centered, meaning that they are written to address grade level benchmarks and standards (Stone, 2010). While some multiage teachers may use them as a resource for ideas, still others may not use them at all. Teachers are more likely to use thematic curriculum materials, integrated units, and project-based curricula as the resources to help with their planning. In order for textbooks to become more relevant to multiage and perhaps all teachers, publishers should design learning modules suitable for varying reading levels, interests, and needs. Textbooks could also be organized around themes that are relevant to students' lives with more suggestions for cooperative group work in the classroom. Ideally, textbooks would offer cross-curricular ideas, incorporating ranges of developmental learning of the material with stages from novice to expert. If textbooks are aligned with the multiage philosophy, they would also remove grade level designations and address concepts through content or themes at varying levels of difficulty. Finally, if textbooks were to be truly useful to multiage teachers, they would offer differing reading levels, opportunities for authentic writing experiences, and a variety of methods to learn the content, including student research, inquiry, and interviewing. Figure 4 presents a model of what a child-centered textbook might look like.

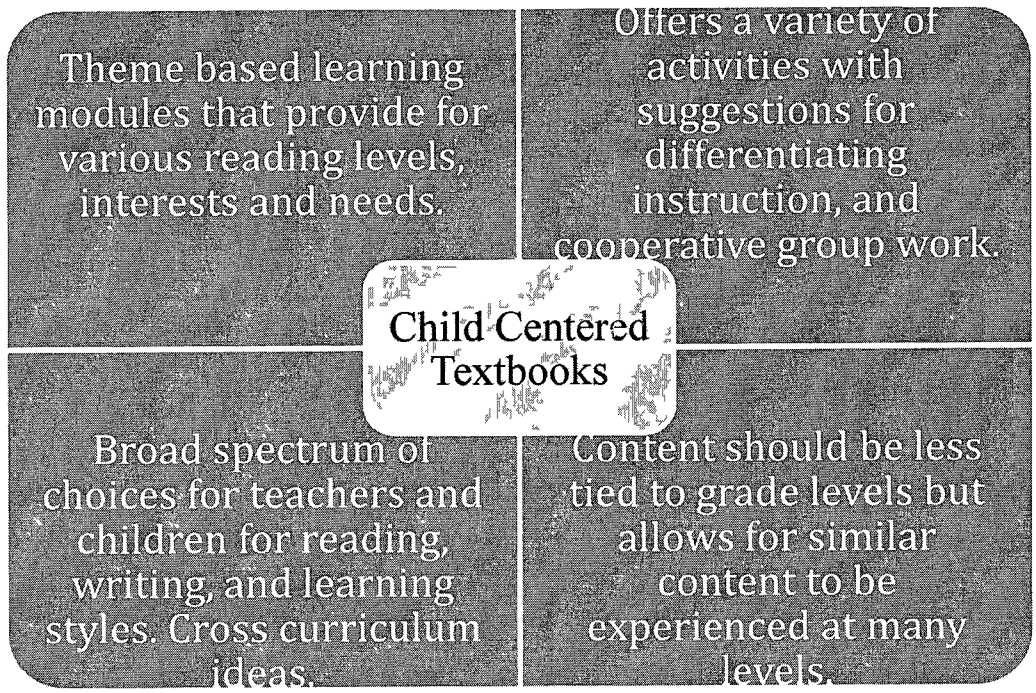

Figure 4. Design for child-centered textbooks.

Recommendations for Future Studies

Since it has been established that multiage instruction is still in practice and the multiage experts in this study perceive it as a credible practice, one area that could be further explored is how the Board of Education in each state could offer support for teachers, parents, and administrators who are interested in multiage models of instruction. Expert panelists were quick to point out that it is not realistic for the state Board of Education to carry the banner for change regarding this model, but because it is a proven best practice, it would be appropriate and helpful for them to acknowledge multiage instruction as this could provide encouragement to those considering change. The state Board of Education's support could also lead to the establishment of demonstration sites or laboratory schools as well as recognizing the need for training at the university level and on-going training and conference experiences for multiage teachers.

Expert panelists acknowledge that there is no research to substantiate what the ideal number of ages to combine might be. Although any number of possibilities might prove successful, it may be interesting and valuable to examine the student outcomes of children who are in multiage classroom groupings of two versus three and four ages, since those ranges were cited as the most common ones appearing in multiage classrooms. The study could explore if there is an age range that proves to be the most beneficial to student outcomes.

In construct two in which an attempt was made to draw out the pros and cons of the multiage experience on the school and the students enrolled, experts generally reported only positive outcomes in their reflections. Further study could be devoted to an examination of multiage practice that examines the challenges or negative outcomes for children in such a setting.

Expert panelists acknowledge that initial training and on-going training for multiage teachers is difficult to find, even though multiage instruction is still a current practice across the United States and the world. The experts in this study did identify key multiage strategies that could be taught in university teacher preparation courses that are developmentally-appropriate and could be helpful to both multiage and traditional classroom teachers. Therefore, another area that could be further explored is to gather more information about what universities across the United States are embedding in their coursework in terms of cooperative learning, thematic instruction, differentiated instruction, flexible grouping, and independent learning centers; these are practices that would equally enrich both models of instruction.

Expert panelists raised concerns about textbooks and their failure to meet the needs of multiage teachers; some commented further that they did a poor job of meeting the traditional teachers' needs as well. Another exciting possibility for further research, therefore, would be to work with publishers to explore what currently is available in curriculum resources and to evaluate how resources could be reconstructed to better meet the need of all teachers. Special consideration could be given to differentiated instruction, cooperative learning, flexible grouping, and other current best practices for all children.

Finally, lack of training and resources have been identified as problems for teachers who are training to implement the model (Anderson & Pavan, 1992). Therefore, in order to truly measure the effectiveness of the multiage model, more studies need to be conducted in multiage classrooms in which there is assurance that the teachers have been properly orientated and who have mastered multiage strategies. Only then can the educational community see the true impact of multiage practice on children's social and academic performance.

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APPENDIX A. INVITATION TO PARTICIPATE IN THE STUDY

North Dakota State University -School of Education
Family Life Center #210, P. O. Box 6050
Fargo, North Dakota 58108-6050
701-231-7921

Title of research study: Teacher preparation & student outcomes

Dear Ms. Camille Brandt;

My name is Valerie Ritland and I am a graduate student in the School of Education at North Dakota State University. I am conducting a research project on multiage education practices. The aim of the study is to identify the unique instructional strategies used in multiage classrooms; identify the specific preparation necessary for teachers, parents and administrators; and identify advantages, and disadvantages for the children in this setting and the barriers to the implementation of the practice. The significance of the study is to have a better understanding of the practice, in order to more accurately measure its effectiveness.

Through professional research or referral, you have been identified as someone with expertise in multiage instruction. If you meet the criteria identified for practitioner or theory expert, you are being selected as one of a group of approximately 40 professional educators to participate in a three round Delphi Study. Round one of the Delphi survey will take approximately 20 - 30 minutes to complete, and the length of time for round two and three typically decreases as consensus builds among the professionals. To enhance the credibility of the study, it is extremely important that you complete all three rounds, however you may quit at any time without penalty.

The study will provide you with an opportunity to see how your views expressed in the study, differ or align with your professional colleagues who are participating in the study. Two sets of experts have been identified, those who are considered practitioner experts and those who are considered theory experts in multiage instruction. The views will be analyzed both within each set of experts as well as in comparison with the other pool of experts. Your responses will be kept confidential. When we present the results, your identity will not be directly linked to your responses; it will be combined with information from other people taking part in this study. However, with your permission, your name will be listed in the study as an expert panelist, along with the names of all of the other participants in this study. You will not receive any compensation for your participation, however being named as an expert in an in-depth published dissertation study on multiage instruction, should prove to bring credibility to you and your profession.

If you choose to participate, please confirm that you meet the experience required for practitioner or theory expert identified in the "Criteria to Participate" form attached.

The criteria document also outlines the timeframe for the survey process. Your participation in the study is voluntary and you will receive no personal benefit for your participation except for the satisfaction of being a part of a contribution to this important study. Although it is not possible to identify all potential risks in research procedures, the researchers will take all safeguards to minimize any known risks to the participants. Thank you in advance, for your consideration and your participation.

If you have any questions about this research project, please call me at 218-477-2546, or you may contact my advisor Dr. Eighmy at 701-231-5775. In addition if you have questions about your rights or complaints about this research, you may talk to me or the NDSU Human Research Protection Program at 701-231-8908, ndsu.irb@ndsu.edu or by mail at: NDSU HRPP Office, NDSU Dept. 4000, P.O. Box 6050, Fargo, ND 58108.

Sincerely,

Valerie Ritland
Doctoral Candidate

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218-477-2546

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APPENDIX B. EXPERT CRITERIA

North Dakota State University - School of Education
Family Life Center #210, P.O. Box 6050
Fargo, North Dakota 58108-6050
701-231-7921

Criteria to participate in a Delphi study on multiage teacher preparation and student outcomes

You are invited to participate in a study which will provide valuable information from experts in the field of multiage instruction in the following areas:

1) Teaching strategies in the multiage classroom
2) Administrative, teacher and parent preparation needed prior to multiage instruction
3) Resources and ongoing training needed to sustain multiage instruction
4) Advantages and disadvantages for children enrolled in a multiage classroom
5) Barriers that interfere with the implementation of multiage instruction

In order to participate in this study, please confirm that you meet the pre-determined criteria for **one** of the expert pools, either practitioner or theory expert.

Criteria for practitioner expert:

- Three or more years of experience working/teaching in a multiage classroom
- Taught to the students as one class, not separate grades and used flexible groupings as a teaching strategy in the multiage classroom
- Received some training in multiage instructional strategies

Criteria for multiage theory expert:

- A total of five or more years of experience working in an elementary school setting
- Some experience, observation of, or knowledge of multiage instructional practices
- Experience in providing training/consultation **or** preparing publications for teachers or programs based on researched best practices.

If you meet one of the above set of criteria, please join other multiage experts in offering your valuable input by accessing the survey at http://www.surveymonkey.com/s/N65TTX3 Round Two questions will be created from the results of Round One data, and will be sent approximately three weeks after Round One surveys have been completed. If a round three survey is needed, it will be sent approximately three weeks after the Round Two survey is completed. As consensus is built among the experts, the time needed to complete the survey in rounds two and three will be significantly less than Round One.

If you choose not to, or are unable to participate in this study, please decline through an email reply to ritland@mnstate.edu to avoid any further follow-up from me.

Thank you for your consideration to this important research study to provide updated and educationally relevant information on multiage practices and outcomes.

APPENDIX C. INITIAL EMAIL AND REMINDER EMAIL ROUND ONE

Initial Email invitation

Greetings, I am an Assistant Professor at Minnesota State University Moorhead, and a doctoral student at North Dakota State University, working on an important study on the training needs and student outcomes of multiage instructional practices. I am looking for a small sample of professionals willing to partake in this study and you have been identified as someone with possible expertise in this area. If you choose to participate, with your permission, you name will be listed in this published study as one of the professionals who shared their expertise. Please take a minute to review the attached letter and the criteria to participate. If you personally do not meet the criteria to participate, but you know someone who does, feel free to pass the invitation on to a colleague. If you have questions, please do not hesitate to ask. Thank you for your time. I would appreciate an email response to inform me of your decision to participate. The survey should be completed by Monday, January 10th, 2011. The survey can be accessed at:
http://www.surveymonkey.com/s/N65TTX3

2nd Email Invitation Reminder to Round 1

Greetings, I am an Assistant Professor at Minnesota State University Moorhead, and a doctoral student at North Dakota State University, working on an important study on the training needs and student outcomes of multiage instructional practices. A few weeks ago, I emailed to inform you that you had been selected as one of a small group of experts invited to participate in this Delphi study. I am now offering you a reminder and extending my deadline for your participation. Although your answers in this survey will be anonymous, your name will be identified in this published study. You will be joining educational multiage experts such as Dr. Lilian Katz, Dr. Barbara Pavan, Dr. Sandra Stone, to name a few. Following the completion of this dissertation manuscript, it is my intention to submit at least one manuscript on this study for journal publication, which may bring recognition and attention to all those participating. After reviewing the attached criteria, and information, I hope you will join in the study. You can access the survey at the following address:
http://www.surveymonkey.com/s/N65TTX3

I would appreciate an email response to inform me of your decision to participate or to decline. All participants must be able to complete their survey by no later than Friday, December 3rd.

APPENDIX D. INVITATION TO ROUND TWO AND ROUND THREE

Round Two Invitation to Participate

Welcome to Round Two of the three round Delphi study on multiage practices. I sincerely want to thank you for your time and your commitment to this important work. You are one of 21 selected experts who are participating in this study. The pool for the survey is small because of the criteria established to participate, and the type of research study being conducted. Therefore it is very important that you complete each round of the Delphi study, to add validity and reliability to the findings.

In Round One of this study there were 55 questions in the three construct areas of a) teaching strategies, b) pros and cons for students, and c) training and development. If consensus was obtained in the response to any question that question was removed from the survey. In this four point Likert scale survey; consensus was determined with a mean score of greater than 3, or less than 2, with a Standard Deviation of less than 1. In Round One consensus was obtained in 37 out of the 55 questions presented. The questions where consensus was not reached are re-presented in this survey. Immediately following the question, you will see the mean score and the standard deviation for that question along with a summary of the comments submitted by the experts for those questions. After carefully reviewing the question and reading the expert responses, please respond and add a comment to defend your answer.

In addition to the 18 questions where consensus was not reached, 13 new questions were added in this survey in attempt to find out more about the consensus areas. The expected completion time for Round Two therefore, is approximately 30 minutes. Following the completion of this survey the results will be compiled, consensus statements will once again be removed, and you will receive your final Round Three survey by the end of February. When the study is complete you will receive a copy of the findings.

Round Three Invitation to Participate

Welcome to the third and final round of the study on Multiage practices, entitled "Multiage instruction; an outdated strategy or a timeless best practice?" I sincerely want to thank you for your time and your commitment to this important work. You are one of only 21 selected experts who are participating in this study. The pool for the survey is small because of the criteria established to participate, and the

type of study being conducted. Therefore your participation in this final round is extremely important to the credibility and reliability of this research.

There were 31 questions in the Round Two survey while just 18 questions remain in round three. The 18 questions re-presented to you will include the panelist comments from both Round One and Round Two surveys. Please read the panelist comments carefully before you determine your final response. Please add a comment to defend your response, if it is a new comment or an idea or theme that has not yet already been expressed by any panelist. Following the 18 questions you will see a summary of comments made regarding the open ended questions that were asked in Round Two. You are welcome to add further comments to this summary, if your comments have not already been shared by another expert panelist. Upon completion of round three and the completion of the dissertation document, a final report with a summary of the findings will be emailed to you.

In earlier rounds you had the opportunity to identify if you wish to be named or to remain anonymous in this study. You now have the opportunity to restate your preference. Being named in the study means you give permission for your name to be published in the dissertation work, as well as any journal articles or books that may be published following this study. Your name will not be linked to any responses in the study as the results are published in aggregate form.

APPENDIX E. DR. BARBARA PAVEN, GOALS OF MULTIAGE CLASSROOM

Goals and Elements of a Fully Realized Nongraded Environment,

from the dissertation of Barbara Pavan (1972):

I. Goals of Schooling

1. The ultimate school goal is to develop self-directing autonomous individuals.
2. The school should help develop individual potentialities to the maximum.
3. Each individual is unique and differences in people are valued, therefore the school should strive to increase the variability of individual differences.
4. Development of the child must be considered in all areas: aesthetic, physical, emotional, and social, as well as intellectual.
5. Those involved in the school enterprise are co-learners, especially teachers and students.
6. The school atmosphere should allow children to enjoy learning, and to experience work as pleasurable and rewarding.

II. *Administrative-Organizational Framework*

A. Vertical Grouping

7. Each individual works in situations where he or she will have opportunities for maximum progress. There are no procedures for retention or promotion, nor any grade levels.
8. A child's placement may be changed at any time it is in the best interest of the child's developmental considering of all five phases; aesthetic, physical, intellectual and social, and emotional.

B. Horizontal Grouping

9. Grouping and sub-grouping patterns are extremely flexible. Learners are grouped and regrouped based on a specific task and are disbanded when that objective is achieved.
10. Each child should have opportunities to work with groups of many sizes, including one person groups, formed for different purposes.
11. The specific task, materials required, and student needs determine the number of students that may be profitably engaged in any given educational experience.
12. Children should have frequent contact with children and adults of varying personalities, backgrounds, abilities, interests, and ages.

III. *Operational Elements*

A. Teaching Materials – Instructional

13. A wide variety of textbooks, trade books, supplemental materials, workbooks, and teaching aides must be available and readily accessible in sufficient quantities.
14. Varied materials must be available to cover a wide range of reading abilities.
15. Alternate methods and materials must be available at any time so that the child may use the learning style and materials most suitable to his or her present needs.
16. The teacher is responsible for providing a broad range of experiences and materials that will stimulate many interests in the educational environment.

B. Curriculum (Knowledge)

17. The unique needs, interests, abilities, and learning rates, styles, and patterns of each child will determine his or her individual curriculum.
18. The curriculum should be organized to develop the understanding of concepts and methods of inquiry more than specific content learning.
19. Process goals will be stressed: the development of the skills of inquiry, evaluation, interpretation, and application; the skills of learning to learn.
20. Sequence of learning must be determined by each individual student and his or her teacher, because:
    a. No logical or inherent sequence is in the various curriculum areas,
    b. No predetermined sequence is appropriate to all learners,
    c. Individual differences in level of competence and in interest are constantly in flux.
21. Each child will formulate his or her own learning goals with guidance from the teacher.

C. Teaching Methods

22. Different people learn in different ways
23. Learning is the result of the student's interaction with the world he or she inhabits, therefore, the child must be allowed to explore, to experience, to mess around, to play, and to have the freedom to err.
24. The process is more important than the product. How the child learns is emphasized.
25. All phases of human growth; aesthetic, physical, intellectual, emotional, and social, are considered when planning learning experiences for a child.

26. The teacher is a facilitator of learning who aids in the child's development by helping each one formulate goals, and diagnose problem areas by providing resource material; and by giving encouragement, support, or prodding as needed.
27. Children should work on the level appropriate to present attainment and should move as quickly as their abilities allow them to.
28. Successful completion of challenging experiences promotes greater confidence and motivation to learn than fear of failure.
29. Learning experiences based on child's expressed interests will motivate the child to continue and complete a task successfully much more than teacher contrived techniques.

D. Evaluation and Reporting

30. Children are evaluated in terms of their past achievements and their own potential, not by comparison to group norms. Expectations differ for different children.
31. Evaluation by teacher and/or child is done for diagnostic purposes and results in the formulation of new education objectives.
32. Evaluation must be continuous and comprehensive to fulfill its diagnostic purpose.
33. A child strives mainly to improve his or her performance and develop potential rather than to compete with others.
34. Teachers accept and respond to the fact that growth patterns will be irregular and will occur in different areas at different times.

35. Individual pupil progress forms are used to record the learning tasks completed, deficiencies that need new assignments to permit mastery, and all other data that will show the child's progress in relation to past achievement and potential.
36. Evaluating and reporting will consider all five areas of the child's development: aesthetic, physical, intellectual, social and emotional.

APPENDIX F. TABLE 8 STATEMENTS (1-7)

Table 8, statement 1: *Multiage instruction is a credible practice for children in elementary school years.*

Agreement: Research confirms this practice. I firmly believe that the growth I see in my younger and challenged students is often the result of peer modeling and coaching. Our classrooms are vibrant communities of learners in which students and teachers work together from the earliest days of the year to create class constitutions which guide their work and expectations throughout the year. Older children serve as role models for younger students... the "experts" about the classroom as the year begins. While instruction may take place in whole group, small group or individually, children work at the appropriate level, regardless of their grade. The goal is always to take each child where he or she is, and challenge each to grow as much as possible. In terms of project work, students may choose their own topics. This is a democratic setting in which students take an active role in their own learning and their behavior. In fact, students participate in setting their academic, work habits and social/behavioral goals and actually plan for and facilitate the family conference in the spring in 2nd, 3rd and 4th grade! Multiage instruction gives children a firm foundation for self-directed learning, therefore creating lifelong learners. It is definitely a practice that works for children in the elementary years - among many other advantages, it is developmentally appropriate and gets children excited about learning. It also respects children's different development rates, and allows learning to take place in a supportive and stress-free environment. In every classroom with just one age level, there is inherently a diversity of learning styles, abilities, and achievement levels, so combining them in a multi-age classroom isn't very different. Good multiage classrooms acknowledge and accommodate the wide range of developmental levels of children in these formative years -- particularly 5-9 or 10. Multiage instruction practice matches more closely and accurately how children grow, develop and learn in the early years/elementary years. The graded system, with children moving among grades and teachers every nine to ten months, is a disruptive system for children, both developmentally and academically. The graded system was "invented" (created) as an efficient way to sort and classify children in the early days of public education, when many more children were coming into the system. Birth dates were something all children possessed, making the organization of schools fairly simple and efficient. The graded system compresses learning and puts undue stress on teachers to deliver the curriculum and children to digest the curriculum in a fairly short amount of time. At the end of that time, they pass or fail. This is not a natural model of learning for young children. Multiage classrooms, based on typically a two or three-year span of learning time, provides stability and continuity of instruction and learning needed by young minds and bodies. I have observed good practices mainly in Scandinavia but in the US as well. The multiage classroom allows students to grow and learn through the pace and challenges set by the teacher and the student. Both my practice as an experienced multi-age teacher, as a researcher in multi-age classrooms, and as a reviewer of existing literature and research on the topic indicates that multi-age groupings are a viable alternative to traditional grade level groupings. Aggregates of research have shown that multiage education is a viable alternative to traditional single grade instruction for those who are seeking a more effective way to scaffold students' learning. Multiage instruction allows children to develop and realize their full potential within the classroom. It has so many wonderful benefits such as individualized student needs, developing leadership and problem solving skills.

Disagreement:
It is, but federal mandates, assessments, lack of resources, etc. make it nearly impossible to continue this best practice. Only if teachers understand philosophy and are provided professional development on assessment, environment and strategies in multiage education.

Table 8, statement 2: *Only teachers who are willing to teach in a multiage classroom, should be assigned to a multiage setting.*

Agreement:
Multiage is a philosophy that you must embrace; if your teachers don't, you have a combined classroom, not a multiage classroom. It is never wise to force a teaching/learning model on a teacher, parent, or community. A teacher must believe in the philosophy of multiage education in order to be as effective as possible. It is a different way of teaching. If the teacher who is assigned to teach the multiage is not positive about the experience then that could affect the benefits of this type of classroom. In general, I agree with the statement above. I did not mark "strongly agree," as I would also like to offer some clarification to my general agreement with the statement. But first, I would paraphrase my answer to a previous question: I don't necessarily agree that multiage education should be forced/mandated on teachers who may not be philosophically orientated to this model of instruction. Many multiage advocates do not believe that multiage education should be mandated or forced on teachers who believe in more teacher-centered approaches (as opposed to student-centered approaches). Forcing multiage education on a teacher who believes that good instruction involves covering a year's worth of curriculum at all costs (regardless if the students are ready for more or less instructional content) seems to doom the teacher to

misery and, therefore, a self-prophesy of failure. Having said that, I would add this caveat: Teachers should also be informed and educated on the basic philosophies and practices of multiage education before they make their decision on their willingness to work with such groupings of students. Case in point, many special area teachers (such as art, music, and PE instructors) are reluctant to work with multiage groupings of students at first, because it seems so different from traditional models of instruction. However, my research with multiage art teachers has shown that once they try working with multiage groups, these same art teachers often found that multiage teaching practices are quite congruent with practices advocated generally in art education (such as cooperative learning, thematic instruction, and the use of interdisciplinary connections). Rather than merely saying, "only teachers who are willing to teach in a multiage classroom should be assigned to teach in a multiage setting", let's add "after having received an appropriate introduction to the basic premise, theoretical underpinnings, and basic instructional strategies that support multiage education." This would allow teachers to make an informed, rather than uninformed, decision about their willingness to work with multiage groups. If the teacher is not on board and engaged how can we expect parents or students to be? For the most part, I agree with the statement above. Teachers whose philosophical view of "good instruction" (IE teacher-centered approaches that emphasize competition, standardization, and "covering" a specific year's worth of curriculum at all costs, regardless of whether or not the students are ready for it) probably are not suited for multi-age instruction, and as such are probably going to be unhappy with the experience (making their students unhappy in the process). However, when presented with the opportunity to teach in multiage settings, teachers also have to be properly introduced to the model itself and its philosophical underpinnings, so that they can make an informed decision about their participation in the model of instruction. For example, some special area teachers (such art, music, and PE) feel reluctant to allow multi-age groupings into their special area classrooms (sometimes even asking the homeroom teachers to send their students to special area classes in single grade groups). If these same teachers were at first exposed and trained on the philosophical underpinning and strategies used in multi-age classrooms, they may realize that the model may indeed fit well with their goals, needs, and student-centered beliefs in special area instruction. For example, thematic instruction with interdisciplinary connections and cooperative learning has been shown to be extremely effective in art education. and a willingness to try new ways of teaching is necessary

Disagreement:
I am not sure how to answer this question. Teachers who are not willing to teach in a multiage classroom because they do not know about the philosophy and don't have the experience can easily be converted! With guidance and support from the administration, colleagues, as well as professional development opportunities, the transition to multiage will probably be a lot easier than the teacher imagined. However, if a teacher knows all about multiage and has been in a multiage setting and STILL is not willing to take it on, then maybe they should not be assigned to that position. On a personal note - The year before I attended my first multiage conference, I had a conversation with the very knowledgeable and experienced KG teacher at our school - about a possible Kg-1st grade multiage, instead of a 1st-2nd multiage. She basically said that she would not want to do it, and that these two grade levels were very difficult to put together. I believed what she said because I thought she knew a lot more than me. Anyway, that summer I attended the multiage institute at NAU and thought to myself "I WANT TO TEACH kg-1st grade, no, better yet, KG, 1st and 2nd!!!!!" This way I can create the environment that is suitable for the kg students that are already reading and writing, and for the 1st graders who are just beginning to develop these skills. This suggested to me that it was often a question of gaining the knowledge and a better understanding of how children learn best!!! Better if they choose, but many have positive experiences once they get into it. If possible allow reluctant teacher to move to another school.

Table 8, statement 3: *The Board of Education in each state should be working to expand multiage instruction, because it is the most developmentally appropriate practice for elementary school children.*

Agreement:
Multiage disbands age segregation. Multiage allows children to develop at their own rate, just as in all aspects of development. It is the most developmentally appropriate approach and one that respects every child as an individual with different needs - and as mentioned above, it is an approach that is in tune with the different rates of development. Yes, I strongly agree....for the reasons cited above as well as many other reasons. Children in high quality multiage classrooms develop learning skills through time given to engage in the process of learning....that is, learning how to learn. Because of the quick turn-around time in graded systems, time given to the learning process itself, not just the curriculum, is extremely challenging to provide. Training in multiage instruction would be beneficial for teachers. As the dynamics of the school room changes, teachers need to think of multiage instruction as a credible teaching approach in the classroom to meet the needs of the students. They should also provide appropriate professional development prior to developing multiage classrooms in each state. Brain based research supports that social interaction and discussion create lasting impacts on developing learning concepts. This social atmosphere is easily cultivated in a dynamic multiage classroom. Multiage instruction allows the teacher to meet all student needs and provide an environment where students are able to interact as mentors and students. I agree with statement, but will not strongly agree with it. The Board of Education should offer support

for those teachers, parents, and administrators who are interested in multi-age models of instruction. While I strongly support the model, I don't believe it should be mandated or forced upon all teachers, students, schools. Not all teachers, for example, are philosophically suited for multi-age instruction. Forcing the model on teachers who do not have a "child-centered" philosophy seems to doom the experience to be negative for many involved.

Disagreement:
That will never happen; this state is too narrow minded. However, teacher preparation is imperative before embarking on policy changes of this magnitude. Well-functioning demonstration sites/lab schools should be developed first, along with plans to change teacher preparation programs at the university level in concert with ongoing professional development for the current teaching force.

No Judgment:
I chose "no judgment" as my opinion differs slightly from the statement above. I believe the Board of Education in each state should be offering support to teachers interested in and already teaching in multiage classrooms. I don't necessarily agree that they should be pushing multiage education on teachers who may not be philosophically orientated to this model of instruction. Many multiage advocates do not believe that multiage education should be mandated or forced on teachers who believe in more teacher-centered approaches (as opposed to student-centered approaches). Forcing multiage education on a teacher who believes that good instruction involves covering a year's worth of curriculum at all costs (regardless if the students are ready for more or less instructional content) seems to doom the model to failure for both the teacher and students.

Table 8, statement 4: *Teachers in multiage classrooms are more likely to teach to the individual ability level of each child in their classroom*

Agreement:
Multiage strategies support the learning of every child without using IEP methods. Teachers know their students more intimately, having participated in their growth through multiple developmental stages. Absolutely, because the focus is on the individual needs of every child, and moving them along the continuum. However, in a single-graded classroom the focus is on the standard that every child has to reach. Also, the strategies used in a multiage classroom, like flexible grouping, allow for teachers to keep up with and attend to the individual learning needs of each child. Absolutely true. The theory and practices of multiage classrooms are supportive of respecting and teaching to the individual ability level of each child more so than the graded classroom. In general, I agree with the statement above. Successful multiage instruction requires that teachers differentiate their instruction by individual student readiness, developmental, and interest levels; having said that, single grade instructors can successfully use these strategies too, if they choose to. Each child is on their own learning trajectory, within a multiage classroom you not only have more time to work with each student but the opportunity to use flexible grouping to maximize their growth while facilitating their learning. In general, I agree with this statement. Teachers in multi-age classrooms must differentiate their instruction to individual readiness levels in order to be successful. Single grade teachers can do this too, but the model of organization does not mandate it under the single-grade lock-step paradigm.

Disagreement:
Single age does not exclude best practice. I don't think you are teaching to each individual ability level as much as you are assessing and evaluating the students' work based on their ability. Achievement level, not ability level.

Table 8, statement 5: *Parents of children in multiage classrooms are generally excited about multiage instruction.*

Agreement:
This depends on if the parents have choice and if they have a positive background in multiage education and philosophy. Majority of our parents wished they had started their child earlier and are glad that younger siblings have a chance to experience this type of school. This has been my experience over the past 4 years. Parents often initially have questions and concerns about the program - whether their child will feel intimidated by the older children, or whether their child will be learning new things, and not be held back academically, in their second year. I think this is true because there is such excitement in multiage classrooms due to less restrictive learning environments and lock-step curricula. The parents can "see" this and see the excitement this generates in the children themselves. The parents that I worked with were generally excited after they experienced the multiage room for a few months. In general, I agree with this statement, although some parents may show some reluctance during the initial stages of implementation. As I mentioned in a previous answer, trust and support has to be built with parents when placing a child in a setting that seems "different" than how many were taught when they were younger. Sometimes orientation sessions are appropriate with parents prior to the start of the school year. Secondly, the "looping" aspect of multi-age education allows teachers to build stronger relationships with parents over time. Teachers and parents don't do through the "song and dance" of getting to know each other at the start of

every school year. Finally, it is always interesting to hear of parents who were reluctant to place their first child in a multi-age classrooms, who then turn around and request that a younger sibling be placed in a similar situation as time goes by. Provided they are presented with the research and information about multiage. I facilitated a parent panel eight years after parents had been involved in multiage education via their students. We wrote an article based on parent reflections. They were very excited, although some admittedly were hesitant when we started

Disagreement:
No comments

No Judgment:
I selected "no judgment" in response to this answer. I wasn't sure if you meant that parents were excited about multiage instruction during the beginning initial stages of implementation, or if you meant that they were excited about multiage instruction once their children had experienced the model for some time. For example, in the beginning stages I have found that some parents experience some reluctance, hesitancy, and even anxiety about initially placing their children in multiage classrooms. As I have noted, people (including parents) are reluctant to accept change from traditional practice. To many parents, the multiage model represents "change" itself. IE: "I wasn't taught that way when I went to school." "That [multiage] doesn't seem like 'real school.'". For these reasons, I find it imperative that schools that plan on offering multiage options also offer orientation sessions on multiage education for parents prior to the beginning of the school year. Such sessions can properly inform parents and ease their anxieties. What is interesting, however, is how over time many parents do become generally excited about multiage instruction. Many of the most reluctant parents at first are the ones who later request that younger siblings also be placed in multiage classrooms too.

Table 8, statement 6: *The process of grouping and regrouping children for instruction, is generally more prevalent in multiage classrooms than in the single-graded classroom.*

Agreement:
Multiage uses both small and whole group strategies. Flexible grouping is prevalent to meet the varying needs and interests of children. Regrouping is part of the process for enabling students to reach their potential. Graded classrooms seem to carry over the same groupings year after year. In a multiage classroom a student can be in one group for a math concept and change groups when a new concept is introduced. It is the student's ability within a concept that dictates their group. Better still what does that student need to master the concept being taught? I agree with this statement as it pertains to small group instruction - for reading, writing or math. In the single-graded classroom children tend to stay in the same instructional groups the entire school year - and often from year to year. In the multiage classroom, with flexible grouping, groups are fluid and are changing from week to week, month to month, according to each child's current development and needs. That becomes a natural process. Yes, because the children themselves are developmentally moving through the curriculum, physically, intellectually, socially, and emotionally. This all matters to the teacher and thus creates a natural flux of learning rhythms that call for different groupings to fit the changing needs and interests of the child/children. In general, I agree with the statement above. Successful multiage instruction probably requires that teachers differentiate their instruction by individual student readiness, developmental, and interest levels, which results in the grouping and regrouping of children; having said that, single grade instructors can successfully use these strategies too, if they choose to. In general, I agree with this statement. Teachers in multi-age classrooms are likely to regroup their students based on individual subject area readiness and interest levels in order to be successful. Single grade teachers can do this too, but the model of organization does not mandate it under the single-grade philosophical paradigm.

Disagreement:
Grouping and regrouping for multiage children isn't really all that different than group instruction in a single-graded room.

Table 8, statement 7: *If a child starts out in a multiage setting at age five, it would be best for them to stay in a multiage setting throughout their elementary school years.*

Agreement:
Because of the benefits of multiage for children, this approach would give any child a richer education. A child's first experience in school creates an expectation for that child year after year. If a parent changes the child from multiage to graded or the classes change while in elementary it may be hard for that student to change his/her way of approaching school. It also may give the student a negative outlook towards school if he/she is used to the multiage classroom and the freedom it provides. Ideally, one would want a child to continue in multiage, but if it is not possible, the years in multiage will have served that child well. While I agree in general, there could be

extenuating variables. I have seen students in primary multiage classrooms transition well to upper elementary grades classrooms, and also have also seen disasters, primarily because the teaching approaches and classroom climate were so dramatically different in the graded classroom -- but this can happen with teacher variance in most any setting. It would be wonderful if a child could stay throughout his/her elementary years, however, there are few programs that are set up for that type of progression. I do feel strongly that it would be best for a child of five to be in a multiage classroom at least through the eighth year of life, the formal end of the primary years of learning. It is beneficial for the student to remain in the multiage setting for at least two years. I have taught multiage for a total of nine years. In those nine years I had one group that stayed with me for almost four years. I felt the students benefited from my teaching. If the multiage setting is positive for the student, and he is making adequate growth I see no reason for him to switch to a single grade classroom. I agree, although if a multiage isn't offered, the child will still be successful. In general, I agree with the statement above, I did not mark "strongly agree", as there are always exceptions. Perhaps a student is diagnosed with ADHD (attention deficit hyperactivity disorder) at age seven, and the student's parents believe that the flexible regrouping practices and movement in a multiage classroom have been too distracting for the child. At the parent's request, multiage teachers could move that child to a single grade classroom. The best needs of the child should always be considered. While I agree with the statement in general, there are always exceptions. Perhaps a student is diagnosed with ADHD (attention deficit, hyper activity disorder) later down the road at, say, age 7. If the parents of the student feel that the movement and flexible regrouping in multi-age classrooms is too distracting, it might make sense to exit the student from the program at the parents' request. The best interests of the child and requests/support of the parents needs to be considered as well. BEST but not necessary.

Disagreement:
It depends on the child and the situation. Sometimes, with our mobile society, families move and there isn't a multiage school available.

APPENDIX G. TABLE 9 STATEMENTS (1-2)

Table 9, statement 1: *There is no difference between the way that the space is arranged in the multiage classroom, and typical room arrangement in the single-graded classroom.*

Agreement:
It depends on the teacher. If it is traditional classroom with seats and desks in a row then multiage classrooms should be arranged differently. If the single-graded classroom arranged tables in clusters for small group meetings then there is no difference. As long as enough space is provided for the many centers needed in a multiage classroom, then space does not matter. A teacher's philosophy can always be predicted by the manner in which a classroom is set up. Some single-graded classrooms are set up to encourage collaboration and social learning. Others are not.

Disagreement: Multiage environments are arranged for experimental and social learning, often through centers and projects. A multiage classroom has more flow for the students to move around. There are no rows. As alluded to above, a multiage classroom must accommodate the needs for whole class discussions, group work, projects, diverse open-ended centers such as art, reading, writing, social studies, theatre, research, music, computer etc. that are running simultaneously, and the need for children to move around, make choices and interact with each other. Therefore the classroom must be set up with these "spaces" in mind.. A typical single grade classroom arrangement would be individual desks facing a whiteboard. Planning is essential for a successful multi-age classroom, and that includes strategic arrangement of materials, students, and work spaces. Typically the multiage classroom is designed for more flexibility in grouping and group work and more project-based learning (centers, etc.) While I wish this "weren't" the case, this isn't seen as often in graded classrooms. There is a world of difference between the physical room arrangement of these two classrooms. The multiage classroom is set up for many more different forms and types of learning interactions, much more so than most graded classrooms. For example, peer to peer learning, whole group, small group, centers, project areas, etc. There is a significant difference. The word "typical" is key here. I'm assuming that the best practices used in a multiage setting may not be the same in a typical single grade classroom. I always mixed my multiage students around in the classroom. The students need to work together as a team and this allows them to learn from each other. The ways that multiage classrooms are arranged may work really well for single grade instruction, but the reverse is not necessarily true. Some traditional single grade arrangements (such as individual and isolated rows of student desks) would not seem to support the cooperative and collaborative practices accentuated in multiage philosophies. As mentioned above, multiage classroom space arrangements may also require ample space for movement and flexible regrouping, and room for learning centers as well. This depends on the teacher and their instructional and aesthetic style, in most cases multiage classrooms have more centers set up around the room. While the arrangement of space in a multi-age classroom may work very well for a single grade classroom as well, the reverse may not be true. For example, sitting students in large desks that allow for cooperative grouping (instead of individually isolated rows of desks) may work well in a single grade classroom too. However, sitting students in individually isolated desks does not match the types of instruction that are expected in multi-age classrooms. In multi-age classrooms, space should be arranged for cooperative grouping, whole group instruction, flexible regrouping and movement, and (hopefully) learning centers.

Table 9, statement 2: *The number of students in a multiage classroom in the elementary grades should be less than the number of students in a single-graded classroom because it is harder to manage the varied needs of children in a multiage classroom.*

Agreement:
Six to seven of each age would be optimal, however it isn't happening. There should be fewer students due to the diversity of learners. In order for the multiage classroom to work well the class size needs to be considered.

Disagreement:
It is actually easier to manage multiage over same grade because of more prosocial behavior, exhibited by multiage children. You have models. High number of children in any classroom is not ideal. However if you are considering the average number of students in a classroom being between 22-25 then there should be no difference. In fact, it would be easier to manage in a multiage classroom. Not necessarily, I think the varied needs of students are easier to manage in a multiage classroom than in a single-graded classroom. The setup in a multiage classroom, which is less teacher centered, and more child centered, gives the students many opportunities to interact and take care of each other's needs. Through the multiage training I received I was given many strategies to manage the different needs, and one is flexible grouping, and open-ended centers, and making it work successfully does not require less [*sic*] students than a single-grade classroom. However, any teacher would agree that the various needs of children in elementary classrooms with over 20 children, are harder to manage, whether

they are multiage or not. Ideally, it should be less, but with careful planning, it can be comparable to a regular classroom because there is such a variety of abilities and levels within a "regular" classroom anyway. The range of needs isn't that different in the graded and multiage classroom - it's just more acknowledged and accommodated in the multiage. All elementary classrooms should be no larger than 18-20 students. Actually, I have found that management of the varied needs is not harder in a multiage classroom. This is because the children assume more responsibility for their own learning. The management of the multiage classroom is shared by the children, and they learn decision making and problem solving skills through this management. Therefore, I find the children in multiage classrooms to exhibit more ownership of their own learning. I am an advocate of smaller student-to-teacher ratios in any classroom situation, not just in multiage classrooms. While all teachers would benefit from fewer students, I do not necessarily agree that these needs are specific to multiage teachers. Personally I feel we need to reduce class sizes in both cases. I don't feel having a multiage class warrants a smaller class size. Not necessarily. I certainly don't advocate for over-crowded classrooms in any scenario. I advocate for smaller student-to-teacher situations in any teaching situation.. . not just multi-age classrooms. Having smaller student-to-teacher ratios is good for all teachers, regardless of the model of organization.

APPENDIX H. TABLE 10 STATEMENTS (1-6)

Table 10, statement 1: *Elementary children tend to get along better, nurture, mentor and act more like family in a multiage classroom, than children in a single-graded classroom.*

Agreement:
A "family" is created and children do interact differently than same grade classrooms, also the children are not competing for the same expectations. Already this year I have had students say that they consider their class a family. That is exactly what has developed in our school. Research bears this out as well as my observation. This seems to me to be the greatest advantage of multiage models of instruction. The accentuation of cooperation over competition and family team-building yields social-emotional rewards that are immeasurable. Due to the collaborative classroom environment, opportunities to mentor, help, and lead; students build a close connection to peers in a multiage classroom. This is the true joy of the multi-age classroom when reaching the pinnacle of opportunities provided by the model. As mentioned above, research shows that the advantages of multi-age education are clearly in the social/emotional/affective domain.

Disagreement:
The atmosphere of the classroom is set by the teacher no matter what type of setting it is.

Table 10, statement 2: *It is beneficial to the student, when they have the same teacher for more than one school year*

Agreement:
Child and teacher get to know each other well. I see that and so do my parents. There is no down time for students to get to know their teacher. You end up with about three to five weeks more instructional time. Because the teacher can gain a better understanding of the individual needs of the student, they truly can hit the ground running at the beginning of the second or third year. Teachers get to know their kids better, and kids feel at ease with their teachers over a longer time. Yes, if the relationship is positive, of course. Absolutely; is it better to have the same parent for more than a year? When children are young, they need a teacher who can follow them through the early stages and sequences of formal learning, and who will truly know them as a learner and a developing human being. Without this continuity in the early teacher-learner relationship, children are "thrown pillar to post" in the educational world every nine to ten months. This is pure folly. This is one of the primary reasons I like to teach multiage classrooms. When the students are familiar with me and the procedures of the classroom more teaching time is gained. Because of the "looping" strategies used by multiage instructors, there is a better opportunity to build stronger and lasting relationships between students and teachers. Such "continuity of caring" not only deepens the student-teacher relationship, but also reduces time spent at the beginning of the school year trying to understand the expectations of the teacher and "getting to know him/her." Students are able to create lasting bonds with their teacher eliminating the restless and carefully tread procedural knowledge acquisition that takes place each year in their new classroom. This allows students to take an active role in the class with a clear knowledge of the teacher's expectations. In general, I agree with this comment,; except in rare cases of poor student-teacher fit, looping leads to a cycle of continuity of caring in relationships between students and teachers.

Disagreement:
Except in cases where there is just a "mismatch," and in those cases students should be reassigned.

Table 10, statement 3: *It is beneficial to the teacher when a child is enrolled in the classroom for more than one year.*

Agreement:
The teacher gets to know the child and their needs. It makes a huge difference in the academic approach when you truly know the student. You know exactly where the student left off in their learning. You know what their strengths and weaknesses are. The teacher has more job satisfaction because he/she has time to really get to know the children and their families, and can therefore achieve more with each child. For example, as the teacher of a first grade age child you get to reassure the worried parent that their child will soon be reading because you can see that the child can do x and y - and then you get to experience the pleasure and satisfaction when the child makes the breakthroughs in second grade. Teachers get to know their kids better. Most multiage teachers report this as one of the greatest benefits -- already knowing the child, their learning style, likes and dislikes, etc., and already established relationship with the parents as well. This is true if the teacher is acceptant [*sic*] of a different view of learning and teaching. If the teacher is committed to "teaching the curriculum" and has little or no interest or education/experience with child development and early learning than that teacher will not know how to access nor participate in the benefits of multiage teaching. It comes down to the question of who is at the core of the

learning process. I would venture to say in most elementary classrooms today, the curriculum is at the core, not the child. It may be why so many new teachers drop out of the profession after three years. The main player in the process is missing. . .the child. When I am familiar with my students I can plan lessons that instruct them at their level right away. Because of the "looping" strategies used by multiage instructors, there is a better opportunity to build stronger and lasting relationships between students and teachers. Such "continuity of caring" not only deepens the student-teacher relationship, but also reduces time spent at the beginning of the school year trying to get to know each student and also in identifying his/her individual developmental, readiness, and interest levels. As mentioned earlier, some multiage teachers also report spending less time on classroom management issues once looping cycles have been established. The remaining students from a looping cycle often aid the teacher in introducing classroom expectations, routines, and rules to new incoming students. Having students more than one year is beneficial in so many ways. You are able to develop a deeper relationship and understanding of their abilities. You are able to spend less time on rules and procedures as previous students are aware of the expectations and new students will look to their peers. You have the opportunity to build a strong relationship with the home creating lasting impacts for the home to school connection and the support the child will receive at home. In general, I agree with this comment. As mentioned above, except in rare cases of poor student-teacher fit, looping leads to a cycle of continuity of caring in relationships between students and teachers. Also teachers won't spend as much time during the first weeks of the school year teaching routines, rules, and getting to know their new students generally.

Disagreement:
For the most part, unless, as sometimes happens, there is a personality conflict that cannot for whatever reason be resolved.

Table 10, statement 4: *Multiage classrooms are less stressful for elementary children than single-graded classrooms.*

Agreement:
Every child is on his/her own continuum and not compared to other children so it is less stressful. The environment is a much safer one for risk taking. There isn't the stress of sitting down being quiet all the time or the pressure of grades relating to tests. Absolutely - without labeling, ability grouping, tests, standards, grades, and a focus on product, multiage classrooms are less stressful, and therefore more enjoyable and more conducive to learning and success for all children. For most elementary students, the multiage classroom is less stressful. "In the case of attitude/mental health, compilations of studies show that students in multiage classrooms were found to have both a better attitude toward school and a better self-concept in over 75% of the studies that were reviewed in comparison to their peers in single grade classrooms." I would also add that mixed-age school situations also seem to reduce some of the social stress associated with promotion and retention. Multiage classrooms are far less stressful for students. They are aware of the classroom expectations and there is a communal learning environment where all ages and stages are allowed to be the leader and follower in different areas. The focus is on each student's individual goals with them comparing their efforts to find personal growth. In the traditional graded classroom a competitive environment is fostered, even unintentionally students label themselves the smartest third grader, the slowest reader in fourth grade etc. For most students this is true. Multi-age classrooms (when reaching the pinnacle of opportunities provided by the model) tend to accentuate cooperation and reduce competition and the stress associated with promotion and retention.

Disagreement:
This depends upon the training of the teacher and how prepared the classroom and curriculum are, of course. The multiage classroom can be stressful in the beginning if children are not used to self directing themselves and working independently.

Table 10, statement 5: *In general, elementary children will do better socially in a multiage classroom versus a graded classroom.*

Agreement:
As supported by research. Socially the older students provide a model for leadership within the classroom. This is obvious because in a multiage classroom so much of the learning is interactive and social. Therefore, there are plenty of opportunities for children to improve and learn social skills, and there are many opportunities for children to develop social characteristics like leadership, caring, nurturing, and collaboration, tolerance and respect. And all this learning is being done in realistic situations, through play and collaborative learning. I tend to agree with this because they have more opportunities to interact with kids of different ages and abilities, and they tend to get used to those differences. I think research shows this to be true. The whole child is taught, not just the mind. Multiage classrooms create a more natural learning environment and purposefully integrate the social nature of learning into their curricula and environment. The classroom learning community and relationships are very

important to the daily functioning of the multiage classroom. The dynamics of classrooms are so diverse now that students in both settings have to learn social skills. Learning those social skills can be easier if the child remains in the same setting for a few years. In the case of attitude/mental health, compilations of studies show that students in multiage classrooms were found to have both a better attitude toward school and a better self-concept in over 75% of the studies that were reviewed in comparison to their peers in single grade classrooms. The flexible groupings and daily immersion with peers of various ages allow students to develop and hone social skills such as communication, problem solving, using empathy, and working cooperatively. In general, research shows that students in multi-age classrooms (about 70% of cases) will have better self-esteem and a more positive outlook toward school than their counterparts in single grade classrooms. The advantages of multi-age education are clearly in the social/emotional/affective domain. There is research on this point.

Disagreement:
No comments to disagree.

Table 10, statement 6: *In general, elementary children do better socially in a multiage classroom versus a single-graded classroom.*

Agreement:
Research demonstrates that this is so. Yes, because each child can learn at their own ability and need. I agree with this because the teaching strategies and classroom environment are more beneficial to all types of learners. The multiage classroom allows children to achieve depending on their different "intelligences" and their different learning styles. I must say, though, that before teaching multiage I taught a straight first grade, but had already had the training in multiage. I applied the same multiage teaching strategies to the single grade and it worked better than the more "traditional way." As my principal has often said - the multiage model exemplifies good teaching strategies. I cannot give an authoritative opinion because we have almost exclusively had multi-age classrooms in our school, but I do know that these kids perform just as well on standardized tests as kids I have worked with in single-graded classrooms in the past. While there shouldn't be a difference, the avoidance of "failure" in a continuous progress multiage classroom does allow the "time" for children to achieve at their own rate, and over time, will permit them to maintain an eagerness to learn which will benefit their academic learning overall. I am not sure about the current research on this. I have found children in multiage settings to do as well academically as children in single-graded classroom. It must be remembered though that there is more at stake and more valued learning elements, than the academic element, in multiage classrooms. The goals for the learners are more vigorous and more diverse and transcend the single dimension academic results factor in the single-grade classroom. When students are able to be individually catered to as they are in multiage classrooms they will be more successful academically.

Disagreement:
Both types of classrooms work well if the teacher is trained and she has support. The results of compilations of studies show that the multiage grouping of students does not have a negative effect on student achievement, and that students in multiage classes perform more or less the same (academically) as their peers in single grade classrooms. Academically, research shows that students in multi-age classrooms will perform more or less the same as their counterparts in single grade classrooms.

APPENDIX I. TABLE 11 STATEMENTS (1-6)

Table 11, statement 1: *Due to their unique needs, English as Second Language (ESL) learners would perform better socially and academically in a single-graded classroom, rather than a multiage classroom.*

Agreement:
There were no comments in agreement with this statement.

Disagreement:
Language learners benefit greatly because of mixed ages. Again peer models and more experienced students support growth in ELL students. I teach in the inner city and though my students are primarily non verbal, their L1 is Spanish so all my students are considered ELL. Even the ones with English listed on their IEP. Multiage classroom is designed to be at the level that students need to be at. Small groups or working within a group allows these students to learn from others and in an individualized manner. Absolutely not! In a multiage classroom where group work, play, and collaboration is encouraged, ESL students are given many opportunities to communicate in English. Active use and practice of the language, in child centered activities certainly helps them perform better academically and socially because they are learning the language much faster. I have experienced this every year with incoming ESL students - they learn the language from their peers, and have many opportunities for communication. Once again, I think it is the theories of learning and child development and ensuing practices and strategies of multiage that enable those classrooms and teachers to approach students more individualistically and in a more holistic manner than single-grade classrooms. With built-in continuity over several years, the multiage teacher has more time to know and understand children with unique needs and to work with a more flexible and diverse delivery system of content and skills to support children with unique needs. It is really an approach so very different from most single-grade classrooms, which become, over time, lock-step delivery systems of content and skills without reference to how the child is developing and what his/her needs and interests are. The dynamics of the mixed ages and abilities would affect how a student performs. Any child can benefit from a multiage room. Due to the philosophy embedded (Vygotsky) in the multiage environment, language is constantly being used, thereby encouraging ESL students to engage in language acquisition in a natural setting. The multiage philosophy is designed to specifically meet the individual readiness and developmental needs of all students. I don't see why this would exclude ESL students. In fact the multiage school that I worked at for eight years was predominantly populated with ESL students (60% - 70%). It was always my impression that they excelled in our multiage program. The individualization that takes place within multiage classrooms allows students to truly hone in on their language skills and take an active role in the progression of their English acquisition. A majority of my time teaching has been with second language learners, I find they progress much more rapidly in a multiage classroom setting. The philosophies of multi-age education suggest that the model is designed to meet students at their individual developmental and readiness levels. I don't understand why this would exclude ESL students. In fact the multi-age school that I taught at in Florida for 8 years primarily serviced (60-70% of the school) ESL students. From my perspective, the model was quite effective with these students. NO! NO! NO! ESL specialist should come into the multiage classroom.

No Judgment:
I have no experience in this area.

Table 11, statement 2: *Due to their unique needs, children in the low-normal range would perform better socially and academically, in the single-graded classroom, rather than in a multiage setting.*

Agreement:
There were no comments in support of this statement.

Disagreement:
Research shows that socio-economic students perform better in a multiage setting, both academically and socially. Just the opposite is my experience. Currently I have a couple of students that fall into this category, their parents say that this is the first year that they are happy to be at school and feel like they fit in socially. I have watched other students become more helpful and caring towards these students. These children perform better in a multiage setting because they are not being compared to children of their same age, and they are not being labeled as low-normal range students. The stress caused by this often further negatively impacts learning, performance and social behavior of these children. There are many opportunities in a multiage classroom for these children to experience success- through flexible groupings, and open-ended learning centers. Likewise, there are many opportunities for them to achieve social success, through play, group work, and the collaborative environment in a multiage classroom. They also need the challenge provided by more able students. The multiage setting gives these students the opportunity to have age-appropriate models and a developmentally appropriate curriculum. Due to their unique

needs, the exact opposite is true; they would perform better socially because the multiage classroom honors and allows for social learning in the environment it purposefully creates. Academically, they would do better due to the multiple teaching strategies and open flexible groupings that take place. Peer to peer teaching and learning that is a vital part of the classroom would also benefit this student. The dynamics of the mixed ages and abilities would affect how a student performs. Any child can benefit from a multiage room. All children can benefit from a multiage setting due to the fact that the curriculum is planned and implemented to benefit each and every child at their own level of development. The multiage philosophy is designed to specifically meet the individual readiness and developmental needs of all students. I don't see why this would exclude students in the "low-normal" range. Multiage classrooms are beneficial to students from all levels and walks of life. The philosophies of multi-age education suggest that the model is designed to meet students at their individual developmental and readiness levels. I don't understand why this would exclude the low-normal range. NO! NO!

Table 11, statement 3: *Due to their unique needs, gifted students, or those in the high average range, would perform better socially and academically in a single-graded classroom, rather than a multiage classroom.*

Agreement:
There were no comments made to support this statement.

Disagreement:
There are no barriers to any student in the multiage classroom. Gifted students would have the opportunity to share knowledge and grow even more through the peer coaching opportunity. Multiage classroom is designed to be at the level that students need to be at. Again, these students will perform better in a multiage classroom with flexible grouping, project work, and open ended centers. For example I had two boys in this high average range - one was a first grader and one a second grader. During literacy centers they got together and read many of the animal books I had in the classroom, and wrote a book called "The best question book in the world" containing questions, illustrations, and answers under a flap. Other classmates were still learning to read and write, but in the multiage environment these children were able to go beyond the expectations of a single-grade first or second grade classroom. (In fact the second grade boy wrote and published his own book when he got to 4th grade!!!) On the other hand, the multiage classroom gives these high achieving students many chances to learn social skills as they learn in groups, are given opportunities to lead and nurture. Also, with the focus off product and grades, these students will find pleasure in learning and not only doing the work for a grade. And on the social front it will make them more inclusive and collaborative learners, instead of striving solely for their own grade and achievement. All students, regardless of their ability, can excel in a multi-age classroom with proper management. On the contrary, a child in a multiage setting is allowed to go as swiftly as they can and desire to through curricula. In addition, I have found that the teaching strategies of the multiage classroom are those of the gifted and talented teachers/classrooms. There is a much greater variety of ways to approach, learn and master skills and knowledge in multiage classrooms, from independent studies to interdisciplinary learning to real world projects. I find these students to thrive in multiage classrooms and often wilt in the single-graded ones. The dynamics of the mixed ages and abilities would affect how a student performs. Any child can benefit from a multiage room. The multiage philosophy is designed to specifically meet the individual readiness and developmental needs of all students. I don't see why this would exclude students in the "high average" or gifted range. Multiage classrooms are beneficial to students from all levels and walks of life. The philosophies of multi-age education suggest that the model is designed to meet students at their individual developmental and readiness levels. I don't understand why this would exclude gifted students. No! NO!

Table 11, statement 4: *Due to their unique needs, children with an Individual Education Plan (IEP) would perform better socially and academically in a single-graded classroom, rather than a multiage classroom.*

Agreement:
There may be cases where a child cannot function in any type of classroom unless the teacher-student ratio is very low.

Disagreement:
The multiage teacher tends to the needs of all children. All my students are on IEPs and do exceptionally well in diverse grouping. Multiage classroom is designed to be at the level that students need to be at. Again I currently have this situation in my room and these students are not being singled out like they would in a single-graded classroom. Small groups allow for some of the individualized needs of these students. Even though I have no direct experience with this, I believe that the non-judgmental and non-labeling environment of the multiage classroom would allow these children to feel more comfortable and therefore perform better socially and academically. Students at the lower end of the academic scale may need to have their work load lightened, but they still should have the same type of expectations. They can be graded on a different scale. On the contrary, they would perform better in a multiage classroom due to the purposeful attention to individual needs that serve as one

of the cornerstones of these programs. The dynamics of the mixed ages and abilities would affect how a student performs. Any child can benefit from a multiage room. The multiage philosophy is designed to specifically meet the individual readiness and developmental needs of all students. I don't see why this would exclude students with an IEP plan. Having said that, and as I have noted earlier, I do understand that individual parental concerns need to be addressed as well. For example, if parents of a student with ADHD (attention deficit hyperactivity disorder) express concern that the flexible regrouping practices and movement in a multiage classroom have been too distracting for the child, then multiage teachers could move that child to a single grade classroom at the parents' request. The best needs of the child should always be considered. Multiage classrooms are beneficial to students from all levels and walks of life. In this situation the student's IEP should be reviewed to make sure their support structures are in place and as in a traditional graded classroom if a high frequency of students were special needs or struggling, it would impact the group. A heterogeneous mixture of students will be best in a multiage classroom. The philosophies of multi-age education suggest that the model is designed to meet students at their individual developmental and readiness levels. I don't understand why this would exclude students with an IEP plan. If the movement and flexible regrouping that occurs in multi-age settings is distracting to ADHD students, then I can see where such a student could be placed in a single grade classroom at a parent's request. NO! NO! NO! The special education teacher should work with the student within the multiage classroom.

Table 11, statement 5: *Due to their unique needs, children with behavioral problems would perform better socially and academically in a single-graded classroom rather than a multiage classroom.*

Agreement:
There were no comments in agreement with this statement.

Disagreement:
The multiage learning environment significantly impacts prosocial behaviors for all students. Peer modeling with my students is huge. All of my students are on IEPs and in my room because of behaviors. Multiage classroom is designed to be at the level that students need to be at. Currently have behavioral problem students within my classroom and those students are doing better within my class than other classrooms that are more like a graded classroom. I think the multiage classroom benefits every type of learner. I recently experienced a child who had been labeled as a behavior problem since pre-kindergarten - she had in fact repeated pre-kindergarten. Until she got to my multiage room in 1st grade she had been in single-grade classes and consistently performed worse than her peers, both academically and socially. In the 1st-2nd grade multiage setting she was able to develop her social skills and build friendships. I was able to develop a strong relationship with her mother, and come up with strategies for us both to use to help the child. These positive developments on her affect eventually impacted her academic achievements. I know that this child owes a lot of her successes to the multiage environment! As a matter of fact, it is the exact opposite. I have often found single-graded classrooms to be uncompromising in their goal of meeting curricula mandates. Children who are different and require different strategies and instructional models can fare poorly. Multiage classrooms because of their set-up for diversity and techniques of creating community and responsible learning habits, as well as attention to the whole child, often do well with children with behavior problems. My experiences have been that children with behavior problems perform better both socially and academically in multi-age classrooms and many of their manifestations of behavior problems are minimized. The dynamics of the mixed ages and abilities would affect how a student performs. Any child can benefit from a multiage room. Due to the community building and cooperative learning that takes place, children help each other in the multiage environment. The multiage philosophy is designed to specifically meet the individual readiness and developmental needs of all students. I don't see why this would exclude students with "behavior problems." Quite to the contrary students with behavior problems are often looking for an outlet and freedom to make positive choices within a reaffirming structure. Multiage classrooms provide exactly that. The philosophies of multi-age education suggest that the model is designed to meet students at their individual developmental and readiness levels. I don't understand why this would exclude students with behavior problems. NO! NO! NO! Behavioral specialist should come into the multiage classroom.

No judgment:
This depends on what kind of behavior problems they have. They should have the same expectations unless they have severe behavior problems.

Table 11, statement 6: *The average student would perform better socially and academically in the single-graded classroom rather than the multiage classroom, because the classroom teacher in the single-graded classroom tends to teach more to the midline student.*

Agreement:
There were no comments made in agreement with this statement.

Disagreement:
There are no barriers to any student in the multiage classroom. There are no limitations to learning in a multiage classroom so the student has no barriers. There is no such thing as an average student. Every student is unique and has the ability to excel in certain areas more than others. Any student wants to be challenged, why put them in a classroom that is only going to teach to them. Bring those students who only seem average to a new level. Allowing students to learn in the way that best fits them allows them to be more confident in other areas. On the contrary, the multiage classroom gives these children opportunities to achieve beyond the expectations of a "mid-line student," there are always authentic situations to 'raise the bar' and these children tend to rise to the occasion. Again, the collaborative environment, and the teaching to broad-based skills allows for subject matter and concepts to be introduced and discussed that are not in the single-grade standards and expectations. It is not uncommon for me to be discussing multiplication strategies, permutations, constants, or figurative language with my first and second graders - because a student led us there. They get challenged by higher achieving students, and they provide help to less able students. Students are seldom "average" across the board in academics or in their social/emotional development. The flexibility in the multiage setting allows students at all levels to progress more at their own rate than at a pre-determined, artificial, mid-point based on a grade-level curriculum. The structure is more likely to accommodate both gifted and low-functioning students because of the individual emphasis and variability of instructional strategies. There are few students who are actually on this elusive man-made mid-line of learning. My experiences have shown me that the average student can and often do suffer greatly in a graded classroom, because they have few opportunities to go beyond average, and almost all of them can! The dynamics of the mixed ages and abilities would affect how a student performs. Any child can benefit from a multiage room. The multiage philosophy is designed to specifically meet the individual readiness and developmental needs of all students. I don't see why this would exclude students in the "average" range. Multiage classrooms are beneficial to students from all levels and walks of life. The philosophies of multi-age education suggest that the model is designed to meet students at their individual developmental and readiness levels. I don't understand why this would exclude the average student. No! NO!

APPENDIX J. TABLE 12 STATEMENTS (1-6)

Table12, statement 1: *Teachers should visit another multiage setting before teaching in their own multiage classroom.*

Agreement:
If at all possible, this is desirable. Nothing better than seeing how something works. If possible, this should happen - it would be very useful in order to see multiage class in action. It would be ideal. Absolutely! They need to "see" it in action....in a high-quality multiage classroom with an experienced teacher, if at all possible. Most importantly, they need time to debrief, ask questions, and engage in professional conversations with the teachers. This is critical. I learn well by watching a model. This would have been very helpful for me in the beginning of my career and even later to refine my practices and understanding. It definitely helps to "picture" what is happening in a multiage classroom to visit others. I think they should, if the opportunity exists. With the right mentorship, training, and support systems, I wouldn't want to stop someone from implementing a multiage classroom just because there wasn't a local observable example in existence. Still, observing an existing successful example is always preferable. Continuous educational improvement for all teachers (multiage or otherwise) depends on establishing ways in which experiences can be shared as direction-providing examples. Viewing positive modeling is a wonderful way to develop ideas and reinforce multiage training. A picture (or observation) is definitely worth a million words.

Disagreement:
Nice, but not essential.

Table 12, statement 2: *Principals of the district should have training on multiage instruction before they administer in a nongraded setting.*

Agreement:
It order to support teachers and advise parents and guide colleagues, it is imperative for them to have training. Principals have to understand what they are promoting in their school and believe as well as the teachers. In order for the administrator to support and develop a multiage program at their school, they should have a good understanding and appreciation of the philosophy. It would impact the decisions they make regarding classroom sizes, class sizes, administering of standardized tests, portfolio assessments, home-school communication, staff development, retention, and so on. Ideally. Yes....in the best of all worlds....but....we do not often inhabit the best of all worlds....At the least, principals of the district who are embarking on this multiage journey should have a child-centered, developmentally appropriate approach to education and an open mind. It is always good when the administration understands the teaching that goes on in his building. So often, in training teachers, we hear "I wish my principal was here." "I wish my administrator would read this information." As educational leaders in schools, I truly believe that principals should have training along with their teachers for successful, less stressful multiage classrooms. Multiage advocates have suggested that that instructors, parents, and administrators should all be included in some sort of training or orientation related to multiage education, and that they all could participate in consensus leadership teams that make joint decisions about the educational goals of multiage classrooms. I would add that special area teaches (such as art, music, and PE) should be included in these trainings as well. Administrators should be trained to understand and support the educational goals of their schools. Principals should attend the same training which the teachers receive.

Disagreement:
There were no comments made in disagreement with this statement.

Table 12, statement 3: *In districts where multiage instruction is offered, school boards should have an orientation to multiage instruction rationale and practices.*

Agreement:
This often clarifies misunderstandings. They must understand what is going on in the schools they are working with. It's a trickle-down effect that will happen if people higher up in the administrative chain are convinced about the benefits of multiage education, and understand how it works, and how they can best support it. Ideally. ABSOLUTELY! I would not advice EVER to go forward with multiage instruction in a district without the understanding and approval of the school board. In order to make decisions that are positive it is always good to have understanding. If the school board has a strong voice in the district, then I believe they too should have an orientation to gain a better understanding of multiage classrooms. School boards vote on many important issues. They should, of course, be informed voters and should be knowledgeable about what is going on in their district.

Otherwise, there could be much misconception about multiage education. Administrators should be trained to understand and support the educational goals of their schools.

Disagreement:
There were no comments in disagreement with this statement.

Table12, statement 4: *In multiage school settings, parents should be offered a training and orientation meeting every school year, to help them understand multiage instructional practices.*

Agreement:
Imperative. We have found this helpful for new parents. I agree, especially initially. This is because the multiage approach is still so foreign to most parents. It just does not fit with the "system" they are used to, and they are anxious about their children being able to achieve when they leave the multiage environment. I think the necessity to have the orientation and training dwindles after the program has been up and running for several years, and the parents are witnessing the benefits for their children. This is precisely what happened at our international school when the 1st-2nd multiage was introduced. First KG parents were given a presentation about multiage and most parents did not know about it. Now that it has been running for four years, we do not offer the orientation anymore, and many parents are requesting the multiage class for their children! Ideally. ABSOLUTELY! In a fast paced culture as ours, it is easy to forget the "why" of what we are doing. In the case of educating children, it is essential to do this; to not do this is simply not wise and does not benefit children and their parents engaged in this process. I believe it is very important that schools that plan on offering multiage options also offer orientation sessions on multiage education for parents prior to the beginning of the school year. Such sessions can properly inform parents and ease their anxieties and misconceptions about a model of educational organization that may seem quite different than the models they participated in when they were children. Orientation on the research and the practices, but not training as teachers might get. Parents need understanding as to the why.

Disagreement:
There were no comments in disagreement with this statement.

Table 12, statement 5: *The Superintendent of the school district should have training in multiage instruction before they administer in a nongraded setting.*

Agreement:
In order to support this approach in the district, this is important. Superintendents and principals have to understand what they are promoting in their schools and believe in the program to support their teachers and staff. Ideally. It is always good when the administration understands the teaching that goes on in his building. It would be preferable that the Superintendent receive some sort of orientation. District leaders at the top level should be informed and knowledgeable about what is going on in their district. In large districts (the district I worked for had over 120 elementary schools alone) tend to depend more on site-based leadership, so I'm not sure that I would go so far as to say that the Superintendent had to have direct training yet, if the principal had already been trained and had the Superintendent's support to move forward. At some point though (sooner than later), the Superintendent should participate in some sort of orientation. Administrators should be trained to understand and support the educational goals of their schools. The Superintendent should be knowledgeable.

Disagreement:
In the best of all possible worlds, yes, however, this is not apt to happen. Once again, it is more important for the Superintendent to have a thorough knowledge of his community and its educational beliefs. In addition, the Superintendent needs to know the learning theory and practices behind multiage classrooms and instructions. A child-centered, developmentally appropriate belief system would be most important. Perhaps not in-depth training as they turn over frequently, and aren't as involved at their level.

Table 12, statement 6: *It is difficult to find regular training and conference experiences geared for elementary teachers who work in multiage classrooms.*

Agreement:
Everything is geared for the "teach to the test mentality," in which there is truly no teaching. Wish there was more for middle school (4th grade - 6th grade). They are certainly not as readily available as training and conference experience for single grade elementary teachers. I haven't really found any. At this time, yes. It is nearly impossible. There are trainings available, but they are too few and far between and are sometimes hard to locate. The exception is the annual sessions offered by the National Multiage Institute on the campus of Northern Arizona University in Flagstaff, AZ. Trainings are also offered throughout Australia by the Australian Association of Multiage Education. Jim Grant's organization (Staff Development for Educators) used to offer trainings upon

request, and may still. Other than that, it's fairly hit-or-miss with local districts providing some small internal training or getting lucky finding a break out session on the topic at a state or national conference geared toward a much larger overall subject. Trainings for special area teachers (such as art, music, and PE) working with multiage groups are practically nonexistent.

Disagreement:
Through online research and cooperation with NAU I have found many avenues to increase my multiage education knowledge.

APPENDIX K. TABLE 13 STATEMENTS (1-5)

Table 13, statement 1: *Teachers who work in a multiage setting require no special training.*

Agreement:
No comments were made to support this statement.

Disagreement:
It is essential to have training so the teacher and children will find success. Training is necessary to help teachers understand the idea of assessing students based on progress rather than product. Teachers do require special training. Adopting the multiage teaching philosophy requires a paradigm shift from the traditional single-grade classroom teaching philosophy. As I did mention before, it was no problem for me to make the shift, but I would not have made it alone, without the training. The mindset is different, and there needs to be a lot of multi-tasking abilities. They require special training. Teachers can do the job of multiage teaching without training; I did. However, it is not advisable nor the best scenario to play out for the children involved. Multiage teaching is complex and involves a theory-set with principles that translate into concrete, diverse and flexible teaching strategies. From the set-up of the physical environment to the flexible groupings to the establishing of a learning community to the delivery of a multi-faceted curriculum, training and time to plan is essential.....for high-quality multiage classrooms to emerge. Differentiated Instruction training, cooperative learning, assessment training, to name a few. It is helpful to receive training in methods that work well in a multiage setting. Even teachers who have had many years of professional training/workshops can use additional multiage training to help support their professional beliefs, and embed their training in research. I disagree completely. Research findings and multiage advocates have both found that teachers working in multiage learning environments require staff development training and access to research about the best practices of multiage instruction in order to prepare for their own multiage classrooms. My own research has implied that training is specifically lacking for special area teachers (such as art, music, and PE) working in mixed-age classrooms. As with the implementation of any program training is key. To be successful using multiage education strategies and practices teachers need consistent and comprehensive training and support.

Table 13, statement 2: *Once teachers receive an initial orientation to multiage classroom practices, no further training or support is needed*

Agreement:
There were no comments in agreement with this statement.

Disagreement:
Continued support is always needed. They need monitoring and support until they are experienced. All teachers need on-going training and support....always. All teachers need training on a consistent basis to stay current and knowledgeable about teaching. I believe that training should be on-going and updated, as needed. Practices and trends change over time. The concerns of multiage teachers in the early 1990s are likely different than the concerns of multiage teachers working in the era of *No Child Left Behind* (although some of those concerns may be unfounded). All teachers need to continually update and revisit (or at least refresh) their beliefs and practices. Proactive teachers are continually refining their craft, attending professional development, and reflecting on their practice. Teachers need to have ongoing resources available to not only stay current in multiage techniques but to build their knowledge base and resource library. Continuing ed is always important. There are other programs that can be brought into the multiage classroom to make it better. Further support and training is needed for multiage teachers to be as successful as possible. There are so many aspects to the new program, and exchanging ideas, getting support, and further training in certain areas is helpful. After my first year of being a multiage teacher I returned to the multiage institute for another course, and it was so beneficial to be able have a dialogue with other multiage teachers, and also to get advice from the experts. However, I do believe all classroom teachers need support and regular professional development opportunities to become better teachers.

Table 13, statement 3: *Textbooks are designed well for use in multiage settings.*

Agreement:
No panelists made comments in agreement with this statement.

Disagreement:
Textbooks fit the curriculum - centered graded model. We do not use any. I don't use textbooks in my classroom on a daily basis. I use them on a limited basis for whole group instruction on a particular subject. I use them as a resource for the students or for myself for ideas for centers. Textbooks are one of the resources that are not needed

in a multiage classroom. They are used for teaching the same thing to all children of a particular age, in a particular grade. This does not happen in multiage where children of the same age will be using different texts, at different levels as resources in the same content area. No, they are not. Textbooks aren't designed well for any setting. In a multiage classroom planning is done according to the needs of the student so the resources can be much the same as a single-graded room. Dating back to the McGuffey Eclectic Readers of the mid 19th Century, most textbooks are written for specific grade levels. Many textbooks in the *No Child Left Behind* Era are written to match specific grade level benchmarks and standards. Because of the looping and developmentally appropriate practices advocated for by multiage philosophies, these textbooks are not useful tools for organizing multiage instruction. However, a few copies of graded textbooks could be useful as reference books or sources for ideas in planning developmentally appropriate activities. There are many curriculums available that cater to independent student needs. Integrated units and project based curriculums stand out as most successful in this regard to me.

No judgment:
Yes and no. They have to be evaluated in light of their intended use.

Table 13, statement 4: *Universities across the United States do an adequate job of preparing future teachers for the possibility of teaching in a multiage environment.*

Agreement:
This depends entirely on the university in question. I was fortunate enough to attend Northern Arizona University so I had an exceptional introduction to multiage education.

Disagreement:
Most universities do not offer this kind of approach. They didn't prepare teachers much for this possibility back a number of years, anyway. Simply not true. I received no training in my under grad courses for multiage classrooms. I disagree. I have received three degrees in education (BS, MA, PhD) from two different universities, and have since taught as a professor at two more universities. None of these institutions has adequately addressed the possibilities of multiage education. Elements of the model had been introduced (cooperative learning, thematic instruction, use of interdisciplinary connections, etc.), but none of the universities directly discussed multiage education itself. Quite frankly, when I became a public school teacher with a degree from a state flagship tier 1 university and with full certification, I had never heard of multiage education before.

APPENDIX L. TABLE 14 STATEMENTS (1-19)

Table 14, statement 1: *The ideal number of ages to combine is three.*

Agreement:
Three or more is best. It is developmentally more appropriate within three years. Having three age groups within the classroom allows all the students to work at their highest capacity and work on their weaknesses as well. Having such a varied age group shows students that not everyone is great at everything. I believe this provides the best developmental range to accommodate student learning needs without excessive pressure on the teacher(s). The whole notion of cross age learning works best with three ages. Teachers are not as inclined to separate the curriculum. I agree, but this is a generalization. I did not check "strongly agree", as I don't think there is a hard and fast rule about which groupings are the best. "Ideal" can be determined on a case-by-case basis with the individual needs of students and teachers in mind; having said that, I have seen the 3-year model to be very successful in the past.

Disagreement:
The (Grades) 1&2, 3&4 configuration has worked well in the settings where I have worked. I don't have experience with teaching more than 2 grades together, but understand that 3 grades is even better, and even ideal. However, I cannot speak from experience. I think three ages to combine is a worthy model, however, I feel that a two-age span of time is also worthy. I have worked with both models and have seen success with both. Not necessarily, family groupings can include much wider range. I believe that two years works best, and that it is based on grades not age. I primarily taught in multiage classrooms that consisted of mainly 2 ages. Many other factors need to be considered along with age like class size, the number of adults to student ratios, etc. While I have observed the combination of three ages to be quite successful, I have not encountered any research that suggests it is the "best" grouping of students. Other combinations can be successful too. Two year spans are just as effective. No research has demonstrated the BEST structure!

Table 14, statement 2: *In elementary school settings where both single-graded and multiage options are offered, all teachers should be trained in multiage strategies.*

Agreement:
This would be excellent because even if they chose not to use the strategies they would have a greater understanding of them. Becoming versed in the multiage strategies made me a better single grade teacher. Therefore I think it is beneficial for all teachers to be familiar with these strategies because every classroom has children with different needs, learning styles and "intelligences." These practices are just as valuable in a graded structure. Teachers in single grade classrooms should at least have a basic understanding of the philosophy of multiage education. If nothing else, an orientation should be provided to all teachers (including special area teachers, such as art, music, and PE, etc.) so that these teachers can accurately discuss the options offered at their school with parents, and so that they can make informed decisions as to whether they would like to lead such a model themselves. This would allow teachers to transition between programs offered when needed and to support one another fully.

Disagreement:
Maybe not "trained," but they should be familiar with what multiage is about. You can't force this on teachers, even through development training. Only if they are teaching in a multiage classroom. I don't believe that teachers who are not interested will gain from training, and in fact, may resent being forced to attend one.

No judgment:
This is a tough question because it is absolutely essential not to pit one group of teachers against another. It is a healthier scenario, I believe, to have a whole school be multiage than to have part of one school single-grade and part multiage. In these times we live in, that produces a win-lose framework for teachers, parents, and children. Better not to have both structures in the same school.

Table 14, statement 3: *There is no difference between the classroom space needed for teaching in a multiage classroom, and the space needed for teaching in a single-graded classroom.*

Agreement:
It would be great for all classrooms to have more space; however multiage does not need more simply because it is multiage. It is all in how you utilize your space. Most of the multiage classrooms I have observed and/or worked with were all "set up" in traditional graded classroom settings. I would organize and implement a single-graded classroom in much the same manner as a multiage classroom. The space is not the biggest factor to me. It is

necessary that the room has adequate space to form small groups and areas for center type learning. Teachers are magical when it comes to arranging and setting up a classroom. In both environments there should be room for centers, flexible grouping and comfortable student movement throughout the course of the day. Multiage classrooms need more space to accommodate the variety of open-ended learning centers that are an important part of multiage education. Also, giving children space to move, gather, and interact is important, and requires space! Less space is required in single-graded classrooms where children are in individual desks, and centers are task oriented, and groups are not flexible. However, having said that, a teacher who adopts teaching practices that reflect the multiage philosophy would require more space - even if they only have a single grade. There is no inherent difference in space needed between the two programs. It would be wonderful to have a larger classroom, that would make centers and groupings easier; however multiage teachers make it work by being committed to the style of teaching.

Disagreement:
I feel a multi-age should be set up more like a Montessori with space for small groups and pair work. If at all possible multiage classes should be larger to allow for a variety of work stations and flexible grouping configurations. Multi-age classrooms do require more spacing for group activities, but that should not be a hindrance to developing them. They can be successful in a regular sized classroom with careful planning, if necessary. Due to the concept of centers, more space is needed in a multiage classroom. Because of the group work and flexible regrouping practices advocated by multiage education, I would think that a classroom with ample open space would be ideal. Team-taught multiage classes may appreciate having a common open space for whole-group "family meetings" and whole group instruction. While the space in a multi-age classroom may work very well for a single grade classroom as well, the reverse may not be true. Ample space is needed for cooperative grouping, whole group instruction, flexible regrouping and movement, and (hopefully) learning centers. Larger teaching spaces facilitate the management of multiage teaching

Table 14, statement 4: *Schools should offer both multiage and single-graded instruction within their school, so that parents have a choice of what environment works best for their child.*

Agreement:
Choice is good. Most parents do not have a choice for multiage. When parents truly understand the growth potential in Multi-age settings I feel the single grade will decline. While this may be difficult administratively, it can work, and may be a good transition option for both teachers and parents in moving toward a multiage school. I strongly agree that parents should have a choice, and that it is best if the two choices are completely "laid out" for them to examine.....to include the theories, research, rationales, goals and objectives of each model. After working, for more than ten years, as a consultant to schools seeking to implement multiage classrooms, I have learned that mandates around models of education are extremely divisive for the communities involved. Educating the public, parents, and the communities is an on-going process and far too many schools do not engage in this educational process. We are living in extremely challenging times, and choice is best. Now, having said that, there is often conflict between single grade teachers and multiage teachers in the same building. There are many issues to address when seeking the right implementation course of action. Choice is important. Yes, but schools should also offer orientation sessions that explain the multiage model and its accompanying philosophy to parents as well. This would help parents to make an informed decision. If and only if both programs have support from all school stakeholders, that they have been well planned, and strong parent education available. Yes, the model should be available for those who are interested. In larger districts, I understand if it is not available in every school. But I think it is important that it is available within the district, based on needs and interests.

Disagreement:
In my opinion, each program can be "watered down" when there isn't a firm philosophical commitment. In our district we are blessed to have two program choices: our multiage Integrated Day Program and a more traditional program, called the Contemporary Program, which has single grade classes. Parents may go back and forth between multiage and graded, this would not be to a child's advantage. It is at best difficult to offer both philosophies at the same campus. I don't agree with this statement because single grade instruction is the norm in most areas, and has been the norm for a long time, so most parents think it is the best way because it's what they know. Not that I don't respect the choice a parent would make for a child, but I just don't think most parents have the experience and knowledge about multiage education that would lead them to make an informed decision. In the school I teach, I am the only multiage teacher, and I have always had the same experience with parents who knew nothing about multiage or were wary of putting their child in my class. At first they were a little uncertain just because they were not used to the idea, and could not imagine how teaching those age groups together could work. But each time they have been pleasantly surprised. Secondly, if both are offered, then there is inherently the question about which is better. I am in this uncomfortable situation of being the only multiage teacher, and out of

respect to my colleagues who teach single-grades, I don't explicitly say that multiage is better, and neither does my principal!

No judgment:
This statement is difficult to address. Parents today were taught primarily in a single grade classroom. It is hard to gain parent support for a concept that is foreign to many parents. One of the schools I taught in gave the parents the choice, and this lead to confusion and apprehension.

Table 14, statement 5: *There is more frequent communication between teachers and parents of children in a multiage in a multiage classroom, than teachers and children in a single-graded classroom.*

Agreement:
Because the multiage teacher purposefully plans for complexity of growth and development, this may be quite true. The multiage teacher usually takes a wider "compass" of the child's growth and development as it impacts the curriculum. This creates more complexities of reporting out and communicating to parent, hence more contact. Since multiage teachers often have the children for three years, the communication is more frequent. Parents become part of the family of learners. Because of the looping strategies used by multiage instructors, there is a better opportunity to build stronger and lasting relationships between not just the students and teachers but the teachers and parents. As relationships deepen, parents and teachers may be more comfortable and inclined to communicate openly with each other. More frequent and richer communication often comes about because the parents and teachers get to know each other better because they work together for more than one year.

Disagreement:
Parent communication is driven by the teacher or the parents in any type of classroom. Just because it is a multiage classroom, it wouldn't be any more or less. This is varied and individual to the philosophy and disposition of the teacher. This is a teacher driven process. If the teacher sets the expectations for interactive communication from the beginning, it will happen in either setting. I think the multiage classroom has an image of being more open and conducive to interaction between parents and teachers, but I don't think that there is any real reason that communication should be more frequent. The nature of the communication is different – qualitative rather than quantitative (graded), but frequency has not been a variable inherent with multiage instruction.

Table 14, statement 6: *Instructional planning for the multiage planning will take more time than the instructional planning for the single-graded classroom*

Agreement:
I think the initial planning in a multiage setting tends to take a bit longer, but after that the class runs itself for a couple of weeks. For example, when planning literacy centers, once the theme has been chosen, the big books picked out, the learning centers thought out, and the materials gathered and set out in the classroom, the children become the daily planners because they decide which activities they want to take on. They make the choices about their learning, and I can take a step back and add guidance when needed. I don't think it's more time consuming than in a single-graded classroom, but it certainly looks different, and it is more interesting and challenging even for the teacher! What tends to be more time is documenting, filing, and keeping track of the anecdotal records and pieces of authentic assessment for each child. This shift to a portfolio-type assessment strategy has required me to be more organized on a daily basis. However, as all my multiage colleagues have cautioned me - it is a matter of time and practice, and one cannot expect to get everything right the first years. I agree that this is the case initially, however with time and experience, I don't believe there is a great difference. It also depends on how much project-based teaching the teacher is already used to doing. Yes, it definitely does take more time in the beginning....for a teacher just getting started. Even after three years of multiage teaching, I would have to say that planning time is longer than the graded classroom. Instructional planning takes flexibility and knowledge of data to drive the lessons. It can initially due to the paradigm shift.

Disagreement:
Once a teacher figures out the strategies it is actually easier. If you plan properly and with your students in mind then I don't think it takes anymore time. In the beginning, preparation for multiage classes does involve more time, energy, and creativity on the part of teachers. However, with experience and as looping cycles progress and as multiage teachers collect thematic resources, the time spent planning is greatly reduced. Looping cycles also present other advantages in time management. The remaining students from a looping cycle often aid the teacher in introducing classroom expectations and routines to new incoming students. Perhaps initially to set up the foundations of a multiage education system within the school but after that planning while different in its scope and sequence is not more time consuming in my opinion. Reports from experienced multi-age teachers indicate that planning for instruction can take more time, energy, and creativity during the first year or two of

implementation. Over time, though, the planning can become less, particularly if teams of teachers stay together and they archive their resources over time during potential re-occurring looping cycles. Not in a team teaching school as the planning load is shared.

Table 14, statement 7: *Parents of children in a multiage classroom volunteer more frequently than parents of children in a single-graded classroom.*

Agreement:
I have found this to be true. I believe it is because the parent took time to research the model and there is more buy in up front. There is a sense of community that forms in a multiage classroom, and given the amount time that the parent, child and family spend together, they are on this journey, so yes. I believe that children in a multiage classroom feel more secure and less pressured than in a graded classroom so parents will tend to volunteer more readily. Because of the looping and the length of time with students and families, there is a better opportunity to build stronger and lasting relationships between parents and teachers. As the relationship deepens, parents may be more inclined to volunteer.

Disagreement:
It depends on the class, some years yes, other years no. Parents volunteer because they want to be involved, not because of the type of school. It depends on the parents in the school. In a lower socio-economic status area, or when parents are working, they may be supportive but they do not have any free time to volunteer during the day. It also depends on if the teacher welcomes parent volunteers.

Table 14, statement 8: *Multiage instruction works best if teachers are able to team teach.*

Agreement:
As a current middle school teacher in a multiage setting - team teaching is a must. I think this statement is true because just as student learning is enhanced by collaboration, group work, and an exchange of ideas, so is teacher performance better in the collaborative environment that is created through team teaching. This is ideal, and the class size can be larger if there are two teachers. However, it really depends on the teachers. In general, I agree with this statement. Multi-age education can still be successful with a single homeroom teachers, but having a partner can sure help. Partners can build off of each other's strengths and weaknesses in planning sound holistic instruction. A key to making the partnership work is finding a good "fit" with teammates, and I believe that the teachers should have some say in forming the partnerships. Incompatible teammates can lead to an unhappy multi-age experience for all involved. YES! YES! Nearly an essential component of multiage!

Disagreement:
Both team teaching and self-contained (one teacher) are viable. It is helpful but not necessary. I think it can work well with team teaching; however, it is not a necessary element. Maybe there is some current research that shows this to be true. Certainly, team teaching is a strong element that can benefit multiage classrooms. I have seen it work well in a number of settings; however teacher training, support and resources are far more determinants of success than team teaching.

No judgment:
There are many advantages to team teaching: Teaching partners are able to balance their strengths and weaknesses. Planning can be easier with collaboration (i.e. two or three heads work better than one). Teaching partners offer more opportunity for flexible regrouping. Having pointed out these advantages, I should also point out that miss-matched teacher partners can lead to combustible situations. I believe that teachers, with some guidance, should have some say in forming their own teaching teams. Compatibility is an important factor in forming professional partnerships. Finally, I would also say that some multiage instructors have been very successful working as the lone instructor of multiage groups. So while I am an advocate of team teaching strategies, I eventually selected "no judgment" as I could not certainly say that it "works best".

Table 14, statement 9: *The best combination of grades is K-1-2 and 3-4-5.*

Agreement:
Even though I have only had experience with 1-2 multiages [*sic*], I would agree that adding KG to the mix would be ideal. The development of children between ages 5 and 8 is quite fluid (it is appropriate, for example, to expect children to learn to read anywhere between 5 and 8, so having those ages together allows for those differences), and so this age grouping reflects this development rate. Similar developments are taking place at different rates for children between the ages of 8 and 11. Perhaps current research is showing this to be true. In my experience, I have observed and/or worked with high quality 2-3, and 4-5 multiage classrooms, as well as 3-4 and 5-6 models. K-1 is a more challenging combination developmentally. As a teacher with experience in multiage I feel that these

grade combinations make the most sense but class size and adult to child ratios need to be considered too. These developmental ranges allow for optimal flexible groupings in the classroom. I agree, but this is a generalization. I did not check "strongly agree," as I don't think there is a hard and fast rule about which groupings are the best. "Ideal" can be determined on a case-by-case basis with the individual needs of students and teachers in mind. Having said that, I have seen the K-1-2 and the 3-4-5 models to be very successful in the past.

Disagreement:
As long as you have three or more ages together the ages or grades really do not matter. Pre-k is its own multi-age band. While I have seen some K-1 configurations that have met with success, the level of independence of 4 and 5 year olds makes it a less desirable choice. I have a hard time seeing 5 year olds who are first experiencing school with a potential 8 year old. I like the grouping of 1-2-3 better. Kinder itself can be a spectrum of maturity, however depending how the school was set up Kinder could be included in a class k-1-2 and then an older 1-2-3 more levels than "grades". I would tend to keep Kindergarten alone. It has been our experience that getting them off to a good academic start involves total immersion in the Kindergarten experience. However, some schools have an intermediary grouping of 2, 3, 4 as well to allow one more option for student's academic and/or social needs. My experience and research has lead me to believe that almost any combination works. It depends on the teacher's ability/desire/expertise and the makeup of the class (heterogeneous groups). While I have observed the combination K-1-2 and 3-4-5 to be quite successful (and these grouping strategies seem sound and logical), I have not encountered any research that suggests it is the "best" grouping of students. Other combinations can be successful too. K-1, 2-3, 4-5 is also a good school structure. PK-K, 1-2, 3-4, 5-6 is also a good structure. Again, no research has demonstrated the BEST combination!

Table 14, statement 10: *The issues that a teacher will encounter in a multiage classroom, are the same issues that a teacher would encounter in a single-graded classroom.*

Agreement:
Some most definitely are the same. Students will have the same types of problems in a graded classroom that they might have in a multiage. However some behavioral problems are eliminated because the multiage classroom is more interactive. Basically, it's all about reaching all the kids. Some instructional issues may be the same. But others will likely have a qualitative difference. For instance, some multiage teachers report spending less time on classroom management issues once looping cycles have been established. As mentioned above, the remaining students from a looping cycle often aid the teacher in introducing classroom expectations, routines, and rules to new incoming students.

Disagreement:
Since there are 2 different philosophical foundations between multiage and same grade, the process and goals are often different. The issues that often become so draining in a single-graded classroom - discipline, meeting all the needs, getting all the children to meet the same standards, are not prevalent in a multiage classroom. A large issue for a teacher making the shift may be just giving up control, and letting the students make more choices. Learning can be messy, and taking the focus of the product and putting it on the process is such an important step to take as a multiage teacher - and this can be an issue for many teachers who are used to a single-graded classroom where they are typically more in control. Personally, this was not an issue, and has been the best shift I have made. It is exciting to see the wonderful creativity and thinking that comes out of the children because I have given them the liberty to explore and build their own understanding. Certainly, some are the same issues. However, the multiage teacher will encounter many different issues because he/she is teaching differently and teaching differently because he/she has a different approach to understanding learning and the needs of the developing child. The child is at the center of the multiage instruction whereas, typically, the curriculum is at the center and drives the graded classroom. This creates different issues. Many of the issues would be the same. However, there may be difficulties with using a graded curriculum, with educating other staff or parents, or with support from administration.

No judgment:
Some issues will be the same, but the socio-emotional/affective rewards in multi-age classrooms, along with positive team building, can be quite a different qualitative experience.

Table 14, statement 11: *Teachers should be the ones to decide if a school offers or transitions to multiage instruction practices.*

Agreement:
Most often this is true as teachers have "buy-in." Teachers need to an integral part of any decision regarding this kind of shift. At least they must be stakeholders in making the decision. Again if teachers do not embrace multiage it will not work. So if the teachers are behind it then it will be a success. They must be part of the dialogue and

planning process for successful implementation. I agree, although teacher input should be paired with parental and administrative input. It has to be a team approach. Parents and administrators should have a voice in the decision as well. What is important, however, is that the teachers play a significant role in the decision making process. As I have implied previously, forcing multiage education on a teacher who believes that good instruction involves covering a year's worth of curriculum at all costs (regardless if the students are ready for more or less instructional content) seems to doom the teacher to misery and, therefore, a self-prophesy of failure.

Disagreement:
I think teachers should be part of the decision, but not the only ones to be making the decision. Such an important decision (although obvious to us!) should be collaborative, involving teachers, parents, administration and other experts. Leadership should come from the top. Teachers need support and help in this endeavor. Parents, administrators, school Boards and teachers should all be involved in the decision-making. Teachers should definitely play a major role in this process. However, they should not be the only ones involved in the decision. . They should be part of a group dialogue of all school stakeholders (parents, community members, admin, support staff, teachers). They should play a role in the process, but their voice is not the only voice involved (parents and administrators play a role too). Teachers do not have to reach consensus on the subject either. Interested groups of teachers can implement multi-age classrooms as add-on options to schools that are primarily single-grade in orientation, with the appropriate support from administration and parents. If the teacher leaders are interested, the principal is knowledgeable, and staff development is available; it is best to move an entire school to multiage at one time. Otherwise there can be misunderstandings between the single age and multiage teachers

Table 14, statement 12: *The issues administrators managing a multiage system deal with are no different than the issues an administrator managing a single-graded system deals with.*

Agreement:
There are differences but overall the downs and ups equal out. Students and schools have the same needs and discipline problems no matter what the type of system being used. Some are easier especially in a team teaching school where teacher look to the team leader and other teachers for assistance. There is some bureaucratic nonsense as the principal "translates" info into the system.

Disagreement:
Same grade and multiage often have different philosophical foundations, which lead to different issues. State testing, etc. can sometimes present problems because of having to be done by grade level, but working collaboratively allows for it to be done. They have to be very available and interact with the teachers a lot, asking questions and giving advice, especially to new teachers. It is different because the emphasis is on acknowledging and addressing the different levels, rather than trying to teach at a single level. I think the issues are different because the multiage classrooms are creating learners in a "new way" than the single-graded classrooms. Multiage classrooms are more complex, and call for an ability and interest to think through the issues of how children grow, develop, and learn and then apply that research and those understandings to the creation and implementation of a more natural way of learning for children. For many adults, this type of thinking and reflecting is neither easy nor natural. Today's culture in this country does not support, at this time, reflection and thinking through the "hard stuff" of what it means to educate a young growing child. A multiage setting requires understanding and many more parent workshops initially. An administrator needs to be a strong educational leader with deep convictions, willing to support his/her teachers as they develop their multiage classrooms. There are differences, but primarily at the organizational level. Over time, as an organization pattern is developed, administrator may become accustomed to these differences.

No judgment:
It is hard for me to pass judgment on this situation, as I have not served as an administrator of a multiage school nor have I collected data on this topic. My gut tells me, however, that the differences are probably more so on an organizational and logistical level. Administration should also consider arranging multiage training for teachers, and orientation for both parents and teachers.

Table 14, statement 13: *In a multiage classroom, ideally you should have an equal number of every age you serve, for example, six 5-year olds, six 6-year olds, six 7-year olds.*

Agreement:
Or as close to this as possible. Ideally, I think this works best. That's the ideal, but not necessarily the reality. It is ideal for easy transitioning each year but not necessary. Best to be approximately equal. Bigger issue is criterion for selection in each teacher's room.

Disagreement:
It makes things divide up easily but I'm not convinced that it's important for instruction. We always hope to be as "equal" as possible, but different numbers of children come to us each year based on the population and enrollment! That would be in a perfect world. Being very close in distribution of ages allows for ease in grouping, but is not necessary. This is not an important consideration. I don't think equal numbers of every age are called for, since the program is set up not by a student's age but by his/her developmental and learning needs. Ability might be a better criterion to consider. More importantly, you should strive to have a balance of boys/girls; social economics; cultural diversity; academic spectrum, etc. This is not necessary although it is nice for the students. While I think some balance of ages is advisable (so that teachers aren't, for instance, merely combining a few "low achieving" 5th graders with a larger number of 4th graders), there is no reason to suggest that the numbers have to be exactly "equal". Playing a precise "numbers game" with multiage classes seems to go against the overall philosophy of flexible grouping practices. Student individual readiness and developmental levels should determine each child's placement, rather than ratios of precise chronological age.

No judgment:
You should seek some balance, so that it is not "ability grouped" to the extent where just a few "low" 5th graders are thrown in with some 4th graders. Academically speaking, this sounds like a fairly homogenous grouping, which is not the hallmark of multi-age education. However, I do not believe that it has to be equal numbers. Multi-age education is not about hard and fast "numbers" and rules ... it is about meeting the best needs of your students, regardless of arbitrarily imposed numbers and rules by teachers and administrators.

Table 14, statement 14: *The biggest obstacle to implementing multiage instruction is No Child Left Behind regulation.*

Agreement:
I have not taught in a school with NCLB, but have only heard negative things about it from colleagues who have. It is obviously not compatible with multiage philosophy, and forces teachers to teach to standardized tests, creating great stress for children, teachers and families. I think that the obstacle against implementing multiage instruction is NCLB-like beliefs about education, the factory model of education. It's the belief in the old system and the lack of willingness to change. However lack of appropriate textbooks and testing strategies are also big obstacles. Definitely NCLB plays a role in being an obstacle, but I believe another misnomer is the notion that multiage education is a "new" fangled notion. Because it operates from a different philosophical basis, it is suspect among many.

Disagreement:
It is definitely an obstacle but the graded system is the biggest obstacle. It is preconceived notions of education for 100 years ago instead of following the latest research in brain development and learning. It is proven that multiage classrooms tend to have higher scores than single-graded classes. Therefore the yearly progress of the school would not be impeded. The biggest obstacle to implementing multiage instruction may be that the model represents "change" or a break from established tradition. People are often reluctant to accept change from what they perceive to be "real" school. There does seem to be the perception that multiage education is incompatible with *No Child Left Behind* (NCLB). The incompatibility of NCLB (and its practices of standardized testing) with multiage education is more of a perceived problem than an actual one. Research shows that students in multiage classrooms tend to perform just as well on standardized tests as their peers in single grade situations. Only minor organizational changes would seem to be necessary when administering such tests as well. For example, let's say that state requirements called for mandatory standardized testing for all fourth graders. Couldn't the third or fifth grade students within that same multi-age classroom take some sort of practice test during that same testing period? Although the requirements of NCLB can still be accommodated in multiage classrooms with ease and successful results, I would point out that the general philosophies supporting the framework of NCLB are not congruent with the philosophies that support multiage instruction. In my opinion, the biggest obstacle in implementing multi-age instruction is that model, to many, represents "change" itself. The model seems very different than ways that we are used to conceiving "real school". NCLB does present an obstacle. However, it is more of a perceived obstacle than an actual one. For example, if students in multi-age classrooms really do perform as well academically as their peers in same-grade situations, why should we fear the model in the day and age of NCLB? The problem is that teachers, parents, and administrators perceive it to be an obstacle due to its emphasis on grade-level organization. Not the BIGGEST obstacle. Not if there is a good curriculum document. There is some bureaucratic nonsense as the principal "translates" info into the system.

No judgment:
Certainly, this is a current large obstacle. However, even without this legislation, the implementation of multiage programs has been challenging in the past. With something so right for children, such a "good fit" for who they are and what they do best, it is amazing that the challenges persist. NAEYC and its solidifying of developmentally

appropriate practices have helped to educate teachers and school systems, still there is a long, long way to go...but there is a more solid experiential and research base to build on now, I believe. One of the major effects of the No Child Left Behind regulations is the fear factor. I am not sure the goals of multiage education and learning match the goals of the country at large.

Table 14, statement 15: *There are some school settings where multiage instruction would not work.*

Agreement:
I think this may be true. Some ultra conservative communities are very set on traditional ways of doing things and are easily alarmed when something "new" appears on the scene. A rather humorous note is that the one room classrooms in American were multi-aged. I have experience with these school settings. There might be others that I am not aware of, nor have experience with. In conservative areas, staff and parents may not be open to the practice. In theory, multiage education should work well in almost any school setting. In reality, the model may not flourish in schools where the overriding school climate and culture accentuates individual student competition and teacher centered-philosophies such as covering a year's worth of curriculum at all costs (regardless if the students are ready for more or less instructional content), standardized instruction, and quiet individual seat work. If adequate resources, training, support and education for all school stakeholders is not available, it will not work. I believe that multiage education can work well for most, if not all, children. But the question above asks about school settings, so my answer is different. If the school climate and culture is strongly competitive, emphasizing standardization and teacher-centered instruction, I just don't see how the multi-age model could flourish.

Disagreement:
If implemented well, multiage is always preferred to same grade because it is a child centered approach. I could not think of one but there are no absolutes so if there is one I would have to be shown the reasoning for it not working well. It does not matter the type of school, if the content being taught within the class is appropriate for the age grouping them it is developmentally appropriate. I think multiage instruction will work well in any setting, provided the instructors are familiar with the philosophy and are ready to implement the strategies that support multiage education. I'm not sure what conditions would prohibit effective multiage instruction other than lack of teacher preparation/support and parental support. Without those things, multiage won't work anywhere. I believe with the right training multiage instruction can work in any setting and be a great benefit to students.

No judgment:
It depends on the philosophy. We're fortunate in that every staff member believes in multiaging and is here because of his/her philosophy of teaching and learning.

Table 14, statement 16: *In a multiage setting, the age of the child is what should determine their readiness to move on.*

Agreement:
Because all children are at different places, the child moves forward to continue his/her education. The criteria such as ability are NOT a consideration. I was in kinder at 4 and would have been ready to move on at 6 so perhaps the 3 years from start would be better with flex kinder now popular. The age of the child, and not his/her academic abilities or achievements should be what determines if a child moves on to the next multiage classroom. This way the expectations for children to achieve a certain amount and behave in a certain way by a certain age are not there - putting unnecessary pressure on the children or the parents. Unless there are unique circumstances, they should move to the next class. In most cases this child has now been in your class for three years, you should have developed a plan for their success and facilitated learning opportunities for their personal growth.

Disagreement:
A child's ability to do the required work should tell the teacher when they are ready to move on. Just because your birthday has come and gone and you are 8 does not necessarily make you ready for 3rd grade. The beauty of the multi-age classroom is that it de-emphasizes age, and instead, emphasizes academic learning levels. Kids don't feel the pressure that they would normally feel if they progress more slowly than others their age. It becomes less noticeable to keep kids in the learning environment that they need to be successful if they are in a multi-age classroom. In multiage settings, the ages of the children do not play a prominent role in the curriculum decisions made by the teacher. Children learn what is developmentally appropriate for them, which means many other developmental factors come into play...not just the chronological age....as it does in graded classrooms. This question also brings into play what type of classroom is the child moving into at the age of 7. That would factor this decision. The teacher should decide when the child is ready to move on, based on social, emotional, physical, and academic readiness. The thinking to move children on as they reach a certain milestone makes sense. Not all students are necessarily ready to move on just because of their age. There does need to be some exiting benchmarks that are acquired through common assessments. The age of the child should not be the primary

indicator of a student's readiness to move on. A more logical indicator would be the student's individual readiness and developmental level, regardless of chronological age. I disagree. The child's developmental and readiness level should determine when he/she is ready to move on. . . not their chronological age level. Socialization can also be a factor in deciding when a child moves on as well. Age is NOT readiness!

Table 14, statement 17: *In school settings that offer both multiage and single-graded options, teachers of single-graded classrooms are always supportive of the multiage option.*

Agreement:
Yes I have found them supportive although graded classroom teachers seem to think it will always be confusing and difficult to coordinate a multiage environment.

Disagreement:
Some teachers are supportive but many are not due to a misunderstanding of multiage or adverse reaction to another system. Unfortunately it seems that there is a lack of support for the multiage classes or these classes are used as gifted classes. Sadly, this is often not the case. Multiage classrooms and teachers can be seen, and often are seen, as a threat to the standard graded classrooms and their teachers. This item is particularly distressing as it lays bare the often unprofessionalism and pettiness of the teaching profession when asked to consider new options and choices. To get teachers working together is often a daunting task. Strong leadership is needed and a stance of not "either or" but "both." The teachers that I have taught with have always been supportive of me, but not necessarily the multiage grade option. From experience, the single-graded classrooms struggled with understanding the reasons for multiage and could not tell the difference in classroom environment. Often times, it's because teachers of single grades don't necessarily understand the philosophical differences with each of the options. No. Often people (including other teachers) are reluctant to accept change from traditional practice. To many, the multiage model represents "change" itself, i.e.: "I wasn't taught that way when I went to school." "That [multiage] doesn't seem like 'real school'". Unfortunately, multiage teachers may even face some of these attitudes from their single grade colleagues. Not all teachers are supportive of the model. Sometimes this is due to their philosophical orientation to education (perhaps they are more teacher-centered), lack of understanding for multi-age education, or their resistance to change (i.e. "I wasn't taught that way." "It differs from my conception of what 'real school' is.")

No judgment:
I have no experience with other teachers and their support of multi-age. I can't really comment on this in general terms. However, as far as my school goes, I get varying reactions. Teachers who are familiar with multiage, and are now teaching single-graded classrooms, tend to be supportive. Teachers who are unfamiliar with multiage tend to think that I have such a tough job, and let me know that they would not like to be in my shoes.

Table 14, statement 18: *Administering and tracking standardized tests is a challenge for multiage settings because of the grade designation for testing.*

Agreement:
It is a challenge, but this challenge has been met successfully in multiage classrooms. The very nature of multiage learning requires a more multi-dimensional approach to assessment than standardized testing. It presents a challenge. But small organizational strategizes can reduce this challenge. When "fourth graders" are administered a mandatory standardized test, what is wrong with the 5th and 3 graders in the room also taking some sort of practice exam at the same time? Yes, but it just takes planning by a competent principal.

Disagreement:
Most multiage teachers are able to handle this as an inconvenience not a challenge, although testing does not fit with the multiage philosophy. If the assessment is treated as any other activity with its own set of rules like any game or activity it should not pose a problem. The only time my students are split are for testing purposes. By spring when testing is done most students have to be told what grade they must report to for testing. The incompatibility of standardized testing practices with multiage education is more of a perceived problem than an actual one. Research shows that students in multiage classrooms tend to perform just as well on standardized tests as their peers in single grade situations. Only minor organizational changes would seem to be necessary when administering such tests as well. For example, let's say that state requirements called for mandatory standardized testing for all fourth graders. Couldn't the third or fifth grade students within that same multi-age classroom take some sort of practice test during that same testing period? Some rearrangement of space and classroom distributions may be in order, but similar reorganization has always occurred during testing periods for various reasons, including reasons related to those students who receive specific testing accommodations. Although such standardized testing practices can still be accommodated in multiage classrooms with ease and successful results, I would point out that the general philosophies supporting the use of standardized testing are not congruent with the

philosophies that support multiage instruction. I did not have difficulty with this my students were separated for assessment. It required some extra planning but went smoothly. My problems with standardized testing do not all arise from their use within multiage education but rather their use at all in the face of glaring data showing their inadequacies as a measurement of performance.

No judgment:
I have no experience with administering or tracking standardized tests. The only standardized test I'm used to administering at the 1st and 2nd grade level is the DRA, a reading assessment. The multiage setting does not pose a problem, and I am able to track the data for each child in my room for 2 years.

Table 14, statement 19: *The curriculum resources needed to teach in a multiage classroom are the same as the curriculum resources needed to teach in a graded classroom*

Agreement:
The materials and basics are the same it is in the use and presentation that we differ most. reverse may not necessarily be true. Multiage advocates recommend that appropriate materials for multiage instruction should be provided for those teachers who have committed to guiding multiage classes. Teachers will need access to materials for hands-on experiential activities, copies of thematically related trade books and/or focus novels, and access to multiple libraries, as well as educational software and technology.

Disagreement:
The resources should be broader and also more authentic. I use more resources in my multiage classroom than I did in a graded classroom. A variety of resources are needed for the students as well as for the teacher. There are quite a few differences in resources needed. One obvious one is classroom texts or sets - only a handful of copies are needed as resources for small groups, as there are no whole group lessons around a textbook. The curriculum resources are different than the standard single-grade classroom because a wider span of developmental levels are taught, demanding a wider range of curricula materials in that multiage classroom. However, the cost may not be higher if compared to "outfitting" a standard-singe grade classroom over a span of two to three years. They need many more resources because they span a wider range of abilities. Many more manipulative are needed to encourage inquiry and discovery.

No judgment:
Yes and no. It depends on the subject matter and age levels. This depends on the academic goals and requirements of the district.

APPENDIX M. STATEMENTS ACCORDING TO RESEARCH QUESTIONS

1. What are the teacher strategies and challenges of working in a multiage classroom?

Statements that reached consensus to agree:

- Multiage instruction is a credible practice for children in elementary school years. (Table 8, statement 1)
- Only teachers who are willing to teach in a multiage classroom should be assigned to teach in a multiage setting. (Table 8, statement 2)
- The Board of Education in each state should be working to expand multiage instruction, because it is the most developmentally appropriate practice for elementary school children. (Table 8, statement 3)
- Teachers in a multiage classroom are more likely to teach to the individual ability level of each child than teachers in a single-graded classroom. (Table 8, statement 4)
- Parents of children in multiage classrooms are generally excited about multiage instruction. (Table 8, statement 5)
- The process of grouping and regrouping children for instruction is more prevalent in the multiage classroom than in the single-graded classroom. (Table 8, statement 6)
- If a child starts out in a multiage setting at age five, it would be best for them to stay in a multiage setting throughout his/her elementary school years. (Table 8, statement 7)

Statements that reached consensus to disagree

- There is no difference between the manner in which the classroom space is arranged in the multiage classroom and the typical room arrangement in a single-graded classroom. (Table 3, statement 1)
- The number of students in a multiage classroom should be less than the number of students in a single-graded classroom, because it is harder to manage the varied needs of children in the multiage classroom. (Table 3, statement 2)

Statements that reached non-consensus

- The ideal number of grades to combine in the multiage classroom is three. (Table 14, statement 1)
- There is no difference between the classroom space needed for teaching in a multiage classroom and the space needed for teaching in a single-graded classroom. (Table 14, statement 3)
- Schools should offer both multiage and single-graded instruction within their school, so parent have a choice of what environment works best for their child. (Table 14, statement 4)
- There is more frequent communication between teachers and parents of children in a multiage classroom than between teachers and parents in a single-graded classroom. (Table 14, statement 5)

- Instructional planning for the multiage classroom will take more time than instructional planning in the single-graded classroom. (Table 14, statement 6)
- Parents of children in a multiage setting volunteer more frequently than parents of children in a single-graded classroom. * Introduced in Round Two. (Table 14, statement 7)
- Multiage instruction works best if teachers are able to team teach. (Table 14, statement 8)
- The best combination of grades at the elementary level is K-1-2 & 3-4-5. (Table 14, statement 9)
- The issues that a teacher will encounter in a multiage classroom are the same as the issues that a teacher in a single-grade classroom would encounter. (Table 14, statement 10)
- Teachers should be the ones to decide if a school offers or transitions to multiage instruction practices. (Table 14, statement 11)
- In a multiage classroom, you should have an equal number of every age that you serve, example; 6 five-year olds, 6 six-year olds, 6 seven-year olds. (Table 14, statement 13)
- There are some school settings where multiage instruction would not work. (Table 14, statement 14)
- In school settings that offer multiage and single- graded options, teachers of single-graded classrooms are always supportive of multiage instruction. (Table 14, statement 16)
- In a multiage classroom, the age of the child is what should determine their readiness to move on. (Table 14, statement 17)
- Administering and tracking standardized tests is a challenge for multiage settings because of the grade designations. (Table 14, statement 18)

2. What training and resources are necessary to implement and support multiage instruction?

Statements that reached consensus to agree:

- Teachers should visit another multiage setting before teaching in their own multiage classroom.(Table 6, statement 1)
- Principals within the school district should have training on multiage instruction before they administer in a multiage school setting. (Table 6, statement 2)
- The superintendent of the school district should have training in multiage instruction before they administer in a multiage school setting. (Table 6, statement 5)
- In districts where multiage instruction is offered, school boards should have an orientation to multiage instruction. (Table 6, statement 3)
- In multiage settings, parents should be offered a training and orientation meeting every school year to orientate them to multiage instructional practices. (Table 6, statement 4)
- It is difficult to find regular training and conferences geared for teachers who work in multiage classrooms. (Table 6, statement 6)

Statements that reached consensus to disagree:

- Teachers in the multiage setting require no special training. (Table 7, statement 1)

- Once teachers receive an initial orientation to the multiage classroom, no further training or support is needed. (Table 7, statement 2)
- Universities do an adequate job of preparing future teachers for the possibility of teaching in a multiage environment. (Table 7, statement 4)
- Textbooks are designed well for non-graded environments. (Table 7, statement 3)

Statements that reached non-consensus:

- The curriculum resources needed to teach in a multiage classroom are basically the same as those resources needed to teach in a single-graded classroom. (Table 8, statement 19)
- In elementary school settings where both single-grade and multiage options are offered, all teachers should be trained in multiage strategies. (Table 8, statement 2)
- Teachers in multiage settings should be given more planning time. (Table 8, statement 9)

3. What are the pros and cons for children enrolled in multiage classrooms?

Statements that reached consensus to agree:

- In general, children will do better academically in a multiage classroom versus a single-graded classroom. (Table 4, statement 6)
- In general, children will do better socially in a multiage classroom versus a single-graded classroom. (Table 4, statement 5)
- It is beneficial to the student when they have the same classroom teacher for more than one year. (Table 4, statement 2)
- It is beneficial to the teacher when they have a child in their classroom for more than one year. (Table 4, statement 3)
- Elementary children tend to get along better, nurture and mentor each other, and act more like family than those who are in a single-graded classroom. (Table 4, statement 1)
- Multiage classrooms are less stressful for students than single-graded classrooms. (Table 4, statement 4)

Statements that reach consensus to disagree:

- Due to their unique needs, children in the low-normal range would perform better socially and academically in the single-graded rather than the multiage setting. (Table 5, statement 2)
- The average student would perform better socially and academically in the single-graded classroom, rather than in a multiage setting because the classroom teacher in the single-graded classroom tends to teach to the mid-line student. (Table 5, statement 6)
- Due to their unique needs, gifted students, or those in the high average range, would perform better socially and academically in the single-graded classroom rather than a multiage setting. (Table 5, statement 3)
- Due to their unique needs, children with an IEP (Individual Education Plan) would perform better socially and academically in a single-graded classroom rather than a multiage setting. (Table 5, statement 4)

- Due to their unique needs, children with behavioral problems would perform better socially and academically in a single-graded classroom, rather than a multiage setting. (Table 5, statement 5)
- Due to the unique needs, English as second language students would perform better socially and academically in a single-graded classroom rather than a multiage environment. (Table 5, statement 1)

APPENDIX N. IRB APPROVAL

Institutional Review Board for the protection of human participants in research

North Dakota State University
Sponsored Programs Administration
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NDSU Dept #4000
PO Box 6050
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Protocol Amendment Request Form

Changes to approved research may not be initiated without prior IRB review and approval, except where necessary to eliminate apparent immediate hazards to participants. Reference: SOP 7.5 Protocol Amendments.

Examples of changes requiring IRB review include, but are not limited to changes in: investigators or research team members, purpose/scope of research, recruitment procedures, compensation scheme, participant population, research setting, interventions involving participants, data collection procedures, or surveys, measures or other data forms.

Protocol Information

Protocol #: HE10056 Title: **Teacher preparation and student outcomes in the multiage classroom**

Review category: ☒ Exempt ☐ Expedited ☐ Full board

Principal investigator: **Dr. Myron Eighmy** Email address: **myron.eighmy@ndsu.edu**
Dept: **School of Education**

Co-investigator: **Valerie Rifland** Email address: **rifland@mnstate.edu**
Dept: **School of Education**

Principal investigator signature, Date: Myron A. Eighmy 7/14/10

Description of Proposed Change(s)

1. Date of proposed implementation of change(s)*: ~~July 15, 2010~~ after IRB approval (ES)
   ** Cannot be implemented prior to IRB approval unless the IRB Chair has determined that the change is necessary to eliminate apparent immediate hazards to participants.*

2. Describe proposed change(s), including justification:
   1) I have changed the criteria for my expert pool; practicitioner experts will require 4 years or working or teaching in a multiage classroom (the prior experience required was five years).
   2) I have changed the criteria for my theory expert pool to 6 or more years of experience of working with or teaching in a multiage classroom. (The prior experience required was 8 yrs.) The reason for the criteria changes in my expert pools, is that further research is showing that multiage classrooms are not as widespread as ten years ago, and the experts may be harder to find.
   3) I field tested my survey questions, and as a result made some changes in the survey. The changes were made in order to make the survey as clear and efficient as is possible so that participants won't get frustrated in the completion of the survey.

4) I slightly changed my instructions to participate so that they can go right to the survey following sending me a reply that they meet the criteria. This change was made in order to speed up the process and increase the chances for participants to complete the survey, so that they don't have to wait to hear from me again to begin.

3. Will the change involve a change in principal or co- investigator?
   ☒ No
   ☐ Yes: *Include an Investigator's Assurance (last page of protocol form), signed by the new PI or co-investigator.*

   Note: If the change is limited to addition/change in research team members, skip the rest of this form.

4. Will the change(s) increase any risks, or present new risks *(physical, economic, psychological, or sociological)* to participants?
   ☒ No
   ☐ Yes: *In the appropriate section of the protocol form, describe new or altered risks and how they will be minimized.*

5. Does the proposed change involve the addition of a vulnerable group of participants?
   Children: ☒ no ☐ yes – include the *Children in Research* attachment form
   Prisoners: ☒ no ☐ yes – include the *Prisoners in Research* attachment form
   Cognitively impaired individuals: ☒ no ☐ yes*
   Economically or educationally disadvantaged individuals: ☒ no ☐ yes*

   **Provide additional information where applicable in the revised protocol form.*

6. Does the proposed change involve a request to waive some or all the elements of informed consent or documentation of consent?
   ☒ no
   ☐ yes – include the *Informed Consent Waiver or Alteration Request* attachment form

7. Does the proposed change involve a new research site?
   ☒ no
   ☐ yes – include a letter of permission/cooperation, IRB approval, or grant application or contract

Attach a copy of the approved protocol, with highlighted change(s) incorporated within the relevant section(s).

[illegible] Impact for Participants [illegible]

1. Will the change(s) alter information on previously approved versions of the recruitment materials, informed consent, or other documents, or require new documents?
   ☐ No
   ☒ Yes - attach revised/new document(s)

2. Could the change(s) affect the willingness of *currently* enrolled participants to continue in the research?
   ☒ No
   ☐ Yes - describe procedures that will be used to inform current participants, and re-consent, if necessary:

3. Will the change(s) have any impact to *previously* enrolled participants?
   ☒ No
   ☐ Yes - describe impact, and any procedures that will be taken to protect the rights and welfare of participants:

----------FOR IRB OFFICE USE ONLY--------

Request is: ☒ **Approved** ☐ **Not Approved**	
Review: ☒ **Exempt, category#:** 2 ☐ **Expedited method, category #** ____ ☐ **Convened meeting, date:** ____	
IRB Signature: Kristy Shirley	**Date:** 4/16/2010
Comments:	

Protocols previously declared exempt: (Allow 5 working days) If the proposed change does not alter the exemption status, the change may be administratively reviewed by qualified IRB staff, chair, or designee. If the change(s) would alter this status, Expedited or Full Board review will be required.

Protocols previously reviewed by the expedited method: (Allow 10 working days) Most changes may also be reviewed by the expedited method, unless the change would increase risks to more than minimal, and/or alter the eligibility of the project for expedited review.

Protocols previously reviewed by the full board: Minor changes (not involving more than minimal risks, or not significantly altering the research goals or design) may be reviewed by the expedited method (allow 10 working days). Those changes determined by the IRB to be more than minor will require review by the full board (due 10 working days prior to next scheduled meeting).

APPENDIX O. ROUND ONE DELPHI SURVEY

1. Consent to participate and summary of expertise

The information from this section of the survey will be used to summarize the profile of the experts participating in this study, and to be able to separate the data from each pool of experts.

***1. I give permission for my name to be identified as an expert participant in this study. I understand that when the results are published, they will be published in aggregate form and that my name will not be linked to my responses. I further understand that I may choose not be identfied in this study, and still be able to participate.**

◯ Yes ◯ No

Name

***2. I read the consent to participate form and I confirm that I meet the criteria to participate in the study on multiage teacher preparation and student outcomes. (If you meet both the practioner and theory expert criteria, please select which one of the expert pools you will represent.)**

◯ Practitioner Expert - (three or more years of working in a multiage classroom utilizing flexible grouping, teaching to the individuals/class and not separate grades, and some training on multiage practices)

◯ Theory Expert - (Five or more years of experience in an elementary setting, some experience, observation of, or knowledge of multiage instructional practices, experience in training, consulting or publishing for teachers or programs, based on researched best practices.)

Other (please specify)

***3. Do you have experience teaching in a traditional, single graded classroom, if yes, indicate how many years you taught in a single graded classroom, and identify the states and/or country where you taught.**

◯ Yes ◯ No

If yes, how many years did you teach in a single graded classroom, and identify the state and country where you taught.

***4. If you have experience teaching in a single graded classroom what grade(s) have you taught? (Check ALL that apply)**

☐ Kindergarten ☐ 1st grade ☐ 2nd grade ☐ 3rd grade ☐ 4th grade ☐ 5th grade ☐ NA

Other (please specify)

***5. If you have experience teaching in a single graded classroom, briefly identify characteristics of the school setting (Check ALL that apply).**

- ☐ Public school
- ☐ Private school
- ☐ Charter school
- ☐ K-6 school
- ☐ K-8 school
- ☐ K-12 school
- ☐ Rural community
- ☐ City - Population less than 1 500
- ☐ City - Population 1 500 - 5 000
- ☐ City - Population over 5 000
- ☐ NA

Other

***6. How many years have you taught or worked in a multiage classroom?**

◯ Three years ◯ Four years ◯ Five years ◯ Six years ◯ Seven years ◯ Eight or more years

Other?

***7. In the multiage classrooms that you worked in, what ages were combined? If you had multiple multiage experiences, please identify the ages for each of your experiences.**

***8. Identify the state(s) and/or country where you taught in a multiage classroom.**

9. Briefly identify characteristics of the multiage classroom where you taught, check ALL that apply.

- [ ] Public school
- [ ] Private school
- [ ] Charter school
- [ ] K-6 school
- [ ] K-8 school
- [ ] K-12 school
- [ ] Rural community
- [ ] City - population less than 1 500
- [ ] City - population 1 500 - 5 000
- [ ] City - population more than 5 000

Other (please specify)

***10. Briefly describe any training you recieved prior to or during the time you taught in a multiage classroom.**

***11. Have had any experience in Administration of a multiage school?**

◯ Yes ◯ No

If yes please describe

***12. Have you provided any multiage training or consultation to teachers or programs?**

◯ Yes ◯ No

If yes please describe

***13. As an individual or in conjunction with others, have you published anthing on the topic of multiage instruction?**

◯ Yes ◯ No

If yes, please describe

2. Teacher strategies and challenges

Please select to what extent you agree or disagree with each statement. Please provide rationale for your choice in the comment box.

***1. Multiage instruction is a credible practice for children in the elementary years.**

◯ strongly disagree ◯ disagree ◯ agree ◯ strongly agree ◯ no judgment

Comments

***2. The Board of Education in each state, should be working to expand multiage instruction because it is the most developmentally appropriate practice for children in the elementary years.**

◯ Strongly disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No Judgment

Comments

***3. Schools should offer both multiage and single grade instruction within their school, so parents have a choice of what environment works best for their child.**

◯ Stongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***4. In school settings that offer both multiage and single graded options, teachers of single graded classrooms are always supportive of the multiage option.**

◯ Strongly disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No Judgment

Comments

***5. There are some school settings where multiage instruction would not work well.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No Judgment

Comments

***6. If a child starts out in a multiage classroom at age five, it would be best for him/her to stay in a multiage classroom throughout his/her elementary school years.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No Judgment

Comments

***7. The ideal number of ages to combine in a multiage classroom is three.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***8. The best combination of grades at the elementary level is K-1-2; and 3-4-5.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***9. In a multiage classroom, the age of the child should determine his/her readiness to move on. Example, if children are in a classroom for 5-6-7 year olds, then they would move on when they turn 8 years old.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***10. The is no difference between the classroom space needed for teaching in a multiage classroom, and the classroom space needed for teaching in a single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***11. There is no difference between the manner in which the classroom space is arranged in the multiage classroom and the typical room arrangement in the single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***12. The number of students in a multiage classroom in the elementary grades should be less than the number of students in a single graded classroom because it is harder to manage the varied needs of children in a multiage classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***13. In the elementary grades, the number of children enrolled in a multiage classroom should not exceed 18 students because more attention to students is needed in the multiage classroom than the single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Other (please specify)

***14. In a multiage classroom you should have an equal number of every age you serve, example; 6 five year olds, 6 six year olds and 6 seven year olds.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Other (please specify)

***15. Teaching strategies used in a multiage classroom are basically the same as teaching strategies utilized in a single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***16. Only teachers who are willing to teach in a multiage classroom should be assigned to teach in a multiage setting.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***17. The teacher-parent partnership and contact with parents in a multiage classroom verses a single graded setting is basically the same.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***18. Multiage instruction works best if teachers are able to team teach.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***19. Instructional planning for the multiage classroom will take more time than instructional planning for the single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***20. Teachers in multiage classrooms are more likely to teach to the individual ability level of each child in their classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***21. Teaching in a multiage classroom presents more challenges for the teacher than teaching in a single grade classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***22. The issues that a teacher will encounter in a multiage classroom are the same issues that a teacher would encounter in a single-graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***23. Administering and tracking standardized tests is a challenge for multiage settings because of the grade designation for testing.**

◯ *Strongly Disagree* ◯ *Disagree* ◯ *Agree* ◯ *Strongly Agree* ◯ *No judgment*

Comments

***24. The process of grouping and regrouping children for instruction is more prevalent in the multiage classroom than in the single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***25. Teachers should be the ones who decide if a school offers or transitions to multiage instruction practices.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comment

***26. Parents of children in multiage classrooms, are generally excited about multiage instruction.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

3. Student/school pros/cons

Please select to what extent you agree or disagree with each statement. Please provide rationale for your choice in the comment box.

***1. Due to their unique needs, children in the low-normal range would perform better socially and academically in the single graded classroom, rather than in a multiage setting.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

2. The average student would perform better socially and academically in the single graded classroom rather than in a multiage setting, because the classroom teacher in the *single grade classroom tends to teach to the mid-line student.

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***3. Due to their unique needs, gifted students, or those in the high average range, would perform better socially and academically in a single graded classroom rather than in the multiage classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***4. Due to their unique needs, children with an Individual Education Plan (IEP) would perform better socially and academically in a single graded classroom rather than in a multiage environment.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***5. Due to their unique needs, children with behavior problems would perform better socially and academically in a single graded classroom, rather than in a multiage environment.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***6. Due to their unique needs, English as a second language (ESL) students would perform better socially and academically in a single graded classroom rather than in a multiage environment.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Other (please specify)

***7. In general, elementary children will do better academically in a multiage classroom verses a single-graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***8. In general,elementary children will do better socially in a multiage classroom verses a *single graded classroom*.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***9. It is beneficial to the student when they have the same classroom teacher for more than one year.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***10. It is beneficial to the teacher when a child is enrolled in their classroom for more than one year.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***11. Elementary children tend to get along better, nurture, and mentor, and act more like family in a multiage classroom, then in the single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***12. Multiage classrooms are less stressful for elementary students than single grade classrooms.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***13. The issues that administration deals with in managing a multiage education system, are no different than the issues that an administrator deals with in managing a single graded educational system.**

◯ Stongly disagree ◯ Disagree ◯ Agree ◯ Strongly agree ◯ No judgement

Other (please specify)

***14. The biggest obstacle to implementing multiage instruction is No Child Left Behind regulations.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Other (please specify)

4. Training and Resources

Please select to what extent you agree or disagree with each statement. Please provide rationale for your choice in the comment box.

***1. Teachers who work in a multiage setting require no special training.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***2. Once teachers receive an initial orientation to multiage classroom practices, no further training or support is needed.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***3. Teachers should visit another multiage setting before teaching in their own multiage classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***4. It takes 2 full years of teaching in a multiage setting, for teachers to become skilled in the unique strategies used in this environment.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***5. Universites across the United States, do an adequate job of preparing future teachers for the possibility of teaching in a multiage environment.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***6. Principals of the district should have training on multiage instruction before they administer in a non-graded school.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***7. The Superintendent of the school district should have training in multiage instruction before they administer in a nongraded school setting.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***8. In districts where multiage instruction is offered, school boards should have an orientation to multiage instruction rationale and practices.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***9. In multiage school settings parents should be offered a training and orientation meeting every school year to help them understand multiage instruction practices.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***10. The curriculum resources needed to teach in a mulitage classroom are basically the same as the curriculum resources needed to teach in a single graded classroom.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***11. In elementary school settings where both single grade and multiage options are offered, all teachers should be trained in the multiage strategies.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***12. Teachers in multiage settings should be given more planning time.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***13. Textbooks are designed well for use in multiage settings.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***14. There are adequate resources available to support schools that choose to operate the multiage system.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments

***15. It is difficult to find regular training and conference experiences geared for elementary teachers who work in multiage classrooms.**

◯ Strongly Disagree ◯ Disagree ◯ Agree ◯ Strongly Agree ◯ No judgment

Comments