ABSTRACT
            This descriptive study used qualitative methods to
examine academic and affective components in two primary level
multi-aged classrooms at a special school for gifted children. The
study methodology included classroom observation, a parent
questionnaire, parent interviews, a student questionnaire, student
interviews, and teacher interviews. The study focused on perceptions
and attitudes concerning: (1) prior expectations of the multi-aged
setting, (2) actual practice and implementation of the multi-aged
program, and (3) general perceptions. Children's and parents'
concerns focused on social and emotional effects of multi-age
grouping, whereas teachers foresaw social benefits and organizational
challenges. Perceptions of students changed over the course of the
year from concern to satisfaction. Perceptions of parents varied but
most concerns had disappeared by the end of the school year, though
parents of children who were the oldest in the classes were less
likely to be satisfied with multi-age grouping. Teachers reported
students' acquisition of leadership skills and growth in academic
areas. Implications for development of multi-age programs are
discussed. Program information and the parent and child surveys are
attached. (Contains 28 references.) (DB)

ED 360 782

DESCRIPTIVE STUDY OF MULTI-AGE GROUPING

FOR PRIMARY GIFTED STUDENTS

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Problem Statement

"School is the only time in our lives that we
interact exclusively with peers whose birthdays
are within one year of our own."

> Parent of Ricks Center primary student

"The family model may be old-fashioned, but the data in
this study support the contention that the model is not
out of date"

> Schrankler (1976, p. 439).

What factors have led educators to look over their shoulders at a vertical organizational structure for grouping students derived from the one-room school house, used widely in the decades of the 1950's and 1960's, then nearly nonexistent in the following two decades? Gutierrez and Slavin (1992) delineate several educational issues of national significance which have motivated the reemergence of multi-aged classrooms. First, literature dating back to Piaget in the 1920's has demonstrated the need for developmentally appropriate learning. Attempts to define academic milestones by grade level fail because children do not develop at the same pace in all areas. William McLoughlin (1970, p. 96) states, "...the most productive educational experience for children comes from programs tailored to fit their uniqueness, with total disregard for predetermined learning timetables." Second, both retention and social promotion studies have resoundingly recorded a negative effect on students (Shepard & Smith, 1989) who are retained leaving educators in a quandary about how to configure classes to meet children's individual learning needs without damaging their self-esteem.

These broad educational concerns were present at the Ricks Center where teachers work with gifted students whose uneven development is often more pronounced than in the normal population. A seven-year old child with advanced mathematical concepts may be struggling with reading and yet be age-appropriate in social interactions with peers. During implementation meetings for the multi-aged classrooms, teachers at Ricks Center identified issues and needs associated with primary level students:

Issues:

1. formation of social cliques among students

2. stereotyping of specific children as immature, slow,
    leaders, academically advanced, etc.

Needs:

1. experiences both as a leader and follower

2. multiple placement options to provide optimal
    match with teacher and peers.

3. placement options for clusters of students with similar
    approaches to learning.

4. provisions for daily exposure to content on many different levels.

5. availability of peers on a variety of social-emotional levels.

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6. classmates with similar interests.

Teachers felt they needed to develop comfortable and appropriate classroom settings where different levels of development and achievement were both accepted and expected. Thus these issues propelled teachers toward more flexible classroom groupings.

In pursuing their commitment to multi-age grouping of students, teachers at Ricks Center discovered that research studies examining this format are limited. Although interest in multi-aged primary classes has increased as a focus for research, the emphasis in most studies is on quantitative methods using experimental or correlational design with standardized test scores as the dependent variable. For the most part, appraisal of multi-aged grouping is based on a single outcome, usually academic achievement. Guiterrez and Slavin (1992) note that it is time to pursue descriptive studies examining instructional programs since difference in outcomes may be influenced more by what happens in the classroom than by how children are grouped.

Our study examines two primary, multi-aged classrooms at the Ricks Center for Gifted Children at the University of Denver using qualitative methods to explore academic and affective components as perceived by teachers, students and parents thus extending the literature on multi-aged classroom groupings to the gifted population.

Literature Review

Gifted learners have the ability to comprehend material at faster rates (Keating, 1976). In a multi-aged classroom, children are exposed to more material covering a broader range of difficulty, and they have the opportunity to address curriculum at an appropriate level (Bouchard, 1991). Gifted learners may have tremendous abilities in one area but not in another (Clark, 1979). A multi-aged group facilitates children performing at their own pace in each area. The individual needs of gifted learners can be more effectively addressed in a classroom where expectations are not based on the grade level of children. A literature review on the subject of multi-aging confirms that this type of grouping results in academic achievement equal or superior to the achievement in graded classrooms and that students involved in this type of grouping have higher self concepts, better attitudes towards school and better socialization. Though no studies have been done dealing with multi-age grouping with gifted students, a literature review on the subject provided generalbackground for the study.

In the early days of America, one-room schools served many students of different ages and abilities. With the advent of the industrial revolution and large scale urban growth, came the ideal of mass public education and the practice of graded schools began (Gausted, 1992). These graded schools separated children by age or grade level and assumed that students in a particular grade are at the same level academically and developmentally. The ease of managing large groups of students by grades, the publishing of graded textbooks and the demand for trained teachers all helped promote the graded organization of schools (Goodlad 7 Anderson, 1987).

The graded school became the major model for grouping children (Gausted, 1992). Occasionally, programs still endeavored to use multi-aged grouping. The Dewey School at the University of Chicago used multi- age grouping during the 1930's. The open school and individualized education movement that occurred during the 1960's and 1970's provided a resurgence of multi-aging during this period. This movement tapered off during the 1980's, and now few of these experimental models remain (Miller, 1989). The concept of multi-aging is still used in rural schools. In 1980, there were still 1,000 one-room schools in rural America (Miller, 1989).

Today, the multi-age concept is returning as a means of meeting economic and social needs of schools. The Kentucky Education Reform Act and the Oregon Education Act for the 21st century include multi-aged grouping as a component of their primary programs (Gausted, 1992). Many other schools and districts are moving in the direction of multi-aging as means of meeting students individual needs and cutting costs (Willis, 1991).

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Much quantitative research has been done to evaluate the effectiveness of the multi-aging concept in both academic and affective areas. By the early 1970's, many research reports, doctoral dissertations and books of readings had been generated. During the 1970's and 1980's, research in this area tapered off (Goodlad & Anderson, 1987). With the rise in interest in multi-aging, however, research on this topic is simultaneously increasing. A current literature search displays three recently completed reviews of research: Miller (1989); Paven (1992); and Guiterrez and Slavin (1992) that compare the effectiveness of multi-age grouping with the graded classroom.

Miller (1989) reviewed 21 studies on multi-age grouping which used standardized measures of achievement and socialization. Thirteen studies dealt with comparisons of the academic achievement of students in multi-aged classrooms to students in graded classrooms. Miller found that in terms of academic performance, multi-aging was equally viable and effective as graded education (Miller, 1989). Miller reviewed ten studies that focused on comparisons of students' attitudes and self-esteem. The students in the multi-aged classrooms displayed better self-esteem and attitudes towards school on 75% of the measures used (Miller, 1989). Studies by Pratt (1986), Milburn (1981), Schrankler (1976) and Way (1980) demonstrate that children who attend multi-age classrooms have more positive attitudes towards school, higher self concepts, greater acceptance of age and achievement differences, increased cooperation and better socialization.

Paven (1992) completed a meta-analysis of research comparing graded and nongraded schools. The clarification of the construct of nongradeness was made by using a Delphi Technique with a panel of experts. Sixty-four studies, completed from 1968-1991, were used from the United States and Canada. Academic achievement as defined by standardized tests was compared in 57 studies. Forty-two studies used mental health measures such as self-concept and attitude towards school to compare students' affect (Paven, 1992).

Paven found that comparisons of graded and nongraded schools using standardized achievement tests favor nongradedness. Her meta-analysis demonstrated that nongraded schools offer improved chances for good mental health, positive school attitudes, academic accomplishments and benefits to disadvantaged students (Paven, 1992).

In a best-evidence synthesis of the achievement effects of the non-graded elementary school, Gutierrez and Slavin (1992) concluded that the effects of nongraded programs depend on the type of program being implemented. This review delineates five categories of nongrading: Joplin-like nongraded programs, which consist of programs who use nongrading in one subject; comprehensive nongraded programs in which more than one subject was nongraded; nongraded programs incorporating individualized instruction; nongraded programs consisting totally of individualized instruction; and studies that lacked an explicit description of the nongraded program. The review concluded that Joplin-like programs and comprehensive programs showed positive effects for multi-aged grouping, while programs that included a great deal of individualized instruction were less consistently associated with achievement gain (Guiterrez & Slavin, 1992).

These three reviews of research display multi-aged grouping as an organizational structure equally as good or superior to graded systems in terms of academic achievement and positive affect. Both Miller's and Paven's reviews found students in multi-age grouped classrooms equal or superior in academic achievement. Slavin and Gutierrez found superior student achievement in multi-aged classrooms. Their findings which showed less consistent academic achievement dealt with an instructional model, individualized instruction, not the organizational plan of multi-aged grouping. All research studies reviewed dealing with the self concept and student attitude demonstrate multi-age grouping as superior to the graded classroom.

There has been much less research done on multi-age grouping using qualitative methods. Qualitative studies use interview, survey and observation to delineate what actually happens in the classroom and how teachers plan and prepare to teach multiple grades. Miller (1989) reviewed the few qualitative studies that have been completed. Bandy and Gleadow (1980) conducted a study of the characteristics and needs of rural school teachers in British Columbia, Canada. The study included surveys of 50 principals, 500 teachers and interviews of 32 teachers. Both principals and

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teachers in this study felt that multi-age grouping required more planning and preparation by the teacher than single-age grouping, and that the most important aspect of a successful multi-grade instruction was the teacher's ability to organize and plan (Miller, 1989). Dodendorf (1983) and Pratt and Treacy (1986) completed studies of multi-age classrooms that included document analysis, observations and interviews. These studies showed that teachers needed to be well prepared to teach in a multi-age environment and that they needed to establish clear routines and a positive, cooperative atmosphere.

Miller's summary concluded that multi-grade classrooms are environments in which teachers must be well-prepared. Classroom routines must be clearly established, understood and followed. A positive family-like atmosphere needs to be developed that provides cooperation and solidarity among the students (Miller, 1989).

Method

The Ricks Center for Gifted Children is an academic year private school program, for three-year old through eighth grade students at the University of Denver. Students are selected for admission based on an educational assessment form (beginning with Kindergarten applicants) including an individual test of intelligence and an individual achievement test, a developmental history, parental interviews, student visits to the school and previous school records.

Dr. Norma Lu Hafenstein, Director, founded the school in 1983 as the University Center for Gifted Children. At Ricks Center, integrated curriculum is thematically organized. Assessment information and diagnostic activities are used to individualize the curriculum. Using curriculum based assessment, Ricks Center teachers develop individual goals and objectives which are written in an Individual Education Plan. (General information about the Ricks Center is attached).

The Ricks Center primary, multi-age grouping model has two parallel classrooms of 18 students each, ages six through nine years. Researchers for this study work at the school. Norma is director of the Rick Center and on the faculty of the School of Education at the University of Denver. Brooke is a primary classroom teacher and graduate research assistant for the school. Nancy is an administrator and researcher. Brooke and Nancy are Ph.D. candidates in the curriculum leadership program at the University. Our immersion in the school program provided continuous access to classrooms. Our personal and professional relationships with teachers, students and parents permitted us to engage in lengthy, in-depth discussions with members of the school community. As Alan Peshkin wrote in "In Search of Subjectivity--One's Own" (1988, p. 18), "....subjectivity can be seen as virtuous, for it is the basis of researchers making a distinctive contribution, one that results from the unique configuration of their personal qualities joined to the data they have collected." Additionally, Peshkin recommends that researchers remain vigilant concerning their own bias. We have monitored each other through interviews and writing, repeatedly inquiring whether we were permitting all points of view to come forth.

We selected an ethnographic, qualitative approach to our study so that the most essential effects of multi-age grouping could emerge and direct the course of the research. Questions that guided our research were:

1. How do parents, teachers and children understand
multi-aged grouping?

2. Is there congruency among parental, teacher and student
perceptions of the multi-age classroom?

3. Are commonalities in perceived level of success of
individual students in multi-age classrooms related
to the age of the child relative to the class?

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Following the first school year of implementation of two primary multi-aged classrooms, parents were asked to complete a brief questionnaire inquiring about strengths and weaknesses of multi-age grouping. From those completing the questionnaires, four parents of students of various ages who had been in the classrooms were interviewed extensively by both researchers. Five students representing younger, middle and older ages within the classrooms were selected for interviews based on responses to a 13-item questionnaire (attached). Two students were offspring of parents interviewed. Our objective in selecting parents and students for interviews was to examine a range of responses from multiple perspectives.

During distribution of questionnaires and selection of students and parents to interview, we jointly conducted and taped extensive conversations with four classroom teachers who had each completed one school year working with one of the multi-age classes. Two of the teachers had been involved in the original design and implementation of the classroom format. Teachers were encouraged to elaborate broadly on aspects of the multi-age grouping experience of interest to them as well as respond to specific questions posed by us.

The researchers purposefully permitted responses in interviews to steer direction of the research. This entailed returning for additional conversations with teachers, parents and students to gain their comments in new areas as the work continued.

Since a collaborative research model was employed, we have discussed both content of data collected and organizational procedures throughout the course of the research.

Data was collected through questionnaire responses, audio tapes of interviews, and conversations, observations and participation in classrooms and written notes and documents from meetings during implementation of the multi-age classes. Data is reported in both summary and narrative form delineating expectations, describing actual practice and explicating perceptions, in order to provide useful information for teachers and administrators considering the use of multi-age classroom groupings within their schools. Data is reported in three sections:

Expectations
Actual practice
Perceptions

In the following pages, responses from teachers, parents and students are related in the expectations and perceptions sections. Descriptive narrative is used to detail actual operation of the classes.

<center>Expectations</center>

Multiple factors in the broader field of education, and within our specific educational setting motivated Ricks Center teachers to propose establishment of two multi-aged primary classrooms in a meeting in the spring of 1991. The fact that seven teachers had chosen nongraded, multi-aged grouping independent of each other prior to discussion of new classroom formatting, demonstrated high expectations for this vertical class structure.

Ricks Center teachers envisioned multi-age classrooms as family units where student placement would be based on multiple criteria. Because there were two classrooms, students would have twice as many placement options as in the past. A list of criteria for placement choices was developed collaboratively:

Cluster students with compatible approaches to learning
(learning style, independence, individual
or group work preference)
Match student with peers who share similar interests
Create positive social groupings
Match students' learning style with teacher's instructional
style

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Maintain gender balance
Match with classmates of similar social/emotional
    development, ability and skill levels
Provide a range of ages with several age peers for
    each child.

     Two teachers with different teaching styles were to be lead teachers in the classrooms. One teacher, Shannon, who had a visual arts background, liked to have flexible organization and scheduling with a rational underlying structure. The other teacher, Kim, had a passion for mathematical thinking, and created both a stimulating and stable classroom. Kim was quiet, gentle and extremely patient. Shannon described herself and her students as "footstompers". Both classrooms had co-teachers who were present in the mornings. Having two very different teachers, and classrooms helped match teachers and students.

     Teachers' expectations focused on affective benefits of family groupings and less competition among students. Teachers worried about their ability to make whole group activities, such as circle time, valuable for all the students. Several recalled doubting their ability to plan for and work with so many different levels. Bouchard (1991) writes that multi-age grouping is great for kids, but difficult for teachers.

     Parents expected children to have social issues. If their child were among the youngest in the class they anticipated inappropriate exposure to children who were developmentally more advanced. One mother recalled wishing that her six-year old daughter, who was a tomboy and a physical match for her older brother, would not learn to be more "feminine and docile" as a result of being in class with older girls. Another parent expected to see great growth in younger children who would be inspired by and try to measure up to older classmates.

     The mother of an eight-year old child believed initially that multi-age grouping would increase the range of physical and emotional differences among students. This contrasts with views of teachers who expected to be able to group children more rationally so that differences were actually reduced and grouping of differences was more rational.

     Younger students expressed initial fear about being with older students. They expected the older children would be unkind and physically overpower younger ones. One parent of an older child said that she and her husband thought her physically large son, who would be among the older boys in the class, might turn into a bully among younger children.

     Older students placed in multi-age classrooms were disappointed not to be "promoted" into the older primary classroom. They expected to miss their friends from the previous year and were embarrassed to be placed with younger children. Peter (8) said, "I didn't like it that much at the beginning of the year because I didn't have all my old friends."

     In summary, children's and parents' concerns were related to social and emotional effects of multi-age grouping. Teachers viewed the format more holistically foreseeing social benefits and organizational challenges.

     Narrative description of brief moments in the classrooms illustrate how primary students of mixed ages interact academically and socially during group time in the opening circle of the morning. Following these experts is an explanation of the classroom organization, combining elements of both classes.

Actual Practice

Kim's Classroom

     Few children glance up at me as I seat myself on the floor between two students in their circle. One child (age 6) stands and crosses the circle to sit in my lap. Her gesture signifies to me that I am accepted by the group and welcome in their circle. One of their teachers, Gay, is reading a poem. Joanna (age 7) claps spontaneously when the reading ends, "Did she write it last spring?" she asks.

     Crepe paper kite tails rustle above the heater fan as Kim lays out toothpicks in a pattern of squares within squares. Students are silent, intent on the developing pattern. Matthias (age 8)

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crawls from his space in the circle to trace several small squares as he explains how he counted them. Next, David (age 9) announcing that he has found 18 squares, traces the big square. Rachael (age 6) with a wide grin and sparkling eyes, says she made up extra squares in blue and yellow and red toothpicks she found at home. Michael (age 8), who waited quietly through previous explanations, eagerly shares that he found 25 squares and points out the medium sized squares others have missed. Teachers' eyes meet across the circle; Kim silently mouths "Wow" to Gay.

Kim reconfigures the toothpicks and asks the children, "Who can add on another square using the least amount of toothpicks?" Several children are certain it requires three additional toothpicks until Michael (age 8) makes a new square using two. His 15 classmates praise him.

"Is there a way to make four squares using less than 13 toothpicks?" queries Kim.

Jared (age 6) removes toothpicks at the edge of the figure studying the results silently. Two more boys join him in the center squatting around the small sticks of wood. Joanna (age 7) suggests from her place in the circle, "Break them into thirds."

Kim responds, "But the problem doesn't say to do it in the rules."

Joanna, with her thumb in her mouth, suggests, "You could change the rules."

"You're right," says Kim, "we could."

Other children are less interested. Jack (age 7) sits quietly playing with his shoe lace; Yacov (age 7) yawns; Matthias (age 8) studies the sole of this shoe. Kim asks the children to estimate how long a distance the toothpicks would cover if they were put end-to-end. Rachael (age 6) jumps up to announce, "Probably 90 miles!" David (age 8) laughs and adds, "A very long walk for a mouse!"

One week later, Kim bursts into my office, "You missed the best part!" Knowing that important student-related events are required to force this much exuberance from Kim's normally quiet, calm exterior, I listen with interest,

> Julene (age 6) got it today. We were working on a totally different problem and she suddenly announced that she saw the other squares. I had tried to show her; Gay tried; then Joanna (age 8) tried too. I think it happened because she saw so many different ways of looking at it. She finally got it and it wasn't because of me! She got it herself!

Shannon's Classroom

Sitting at a table covered by a poster proclaiming "Celebrate Women in History," I am frustrated in my attempt to take notes because these sixteen, 6, 7 and 8-year old students are intently discussing today's date in Swahili. Kiki (age 6) takes the old numbers from pockets hung on the board marked "yesterday," "today," "tomorrow" and replaces them saying:

> Jana was Jumanane, tano, elfu mia tisa tisini tatu.
> Leo is sita, jumma tano elfu mia tisa tisisni tatu
> Ksho will be saba, jumma sita elfu mia tisa tisini tatu

While Kiki works, other children discuss with their teachers how long they have been away from school during spring break.

Several students arrive late, busily store lunch kits in cubbies, file attendance cards then join the circle of children in the corner of the room under a life-sized, painted and stuffed paper ostrich they created. George (age 6) records another day of school by adding a straw to the yellow ones-basket. Today is day 116 of the school year. The hundreds basket has ten bundles of ten straws carefully counted and bundled. The green tens-basket contains one bundle of ten straws. Today George adds a sixth straw to the yellow-ones basket, noting that on Friday he will add another bundle to the green basket.

These children are on a curricular voyage journeying from one culture to another in a year-long study of many lands. This month they are in Africa. Souvenirs from previous themes

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decorate the walls and ceiling of their room. Strings of delicate origami birds draped over lights hang above the children's heads. Intricately carved wooden African animals decorate the windowsill where Eli (age 8) stores his 28 page album of football cards after sharing it as the featured student of the week. Mayan calendars and children's colorful images of Mexican gods surround a large handwritten paper entitled "How to use Geometry." Entries include:

> drawing or painting abstract pictures
> straighten children - braces
> in pizza jokes
> making pictures in mind where things are, like a map
> packing lunch so everything fits

Linda begins a math lesson in doubles and counting on. Keaty (age 6) counts on from three to make its double. Her body bounces in rhythm as she says each number. Next Lee (age 7) explains his trick for doubling tens. Eli (age 8) agrees that it is a good trick and adds that in this case he already had the number memorized.

Linda asks the children if they can think of a trick for doubling 70. She pauses while children mentally work on the problem. More and more hands go up. Kiki (age 6) gives an answer so softly I cannot hear it and other hands shoot up immediately. Shannon ignores the waving hands and asks Kiki how she found her answer. Kiki responds, "It would take a long time to count on, but I could count by tens. I didn't realize it wasn't right when I said it. I counted on my fingers using 10's then added a zero." Allison (age 7) adds, "There's another way to count by tens. You could say, 'twenty, forty, sixty' then you'd have three twenties!"

Linda asks how you might write the double of three as a math problem. Stephanie (age 7) responds, "Three plus three." Linda asks, "The double of seven?" George (age 7) responds, "Seven plus seven."

Linda gathers up the cubes she has used to illustrate doubles and glances at Shannon who calls the names of five students to stand up. She asks them to pick groups with different people from yesterday. They will generate more names for their utopian society. "The names need to be meaningful", she cautions.

After school the following afternoon, a parent of a child who was silent during the class session I observed greets me in the hall saying she really understands how much school means to her daughter, Tera (age 6). Last night over the dinner table Tera told her family about choosing names for their societies, and Tera reported that her favorite names was, "Beautiful school".

Classroom Organization

The preceding experts of classroom life are derived from two different multi-age classrooms at the Ricks Center for Gifted Children. The classrooms are structured to facilitate multi-age grouping. The teachers endeavor to create an environment that encourages a family-like cooperative community referred to by Miller (1989). Teachers use the same basic structure for the classroom, which consists of an interdisciplinary curriculum and individualized math, writing, and reading. Teachers' personalities and students' needs impact the actual implementation of a classroom routine.

The day begins in the multi-age classrooms with circle, where children share current events, discuss the day and date, and review the schedule for the day. Circle is an important time in the multi-aged classrooms at Ricks Center. It allows the students opportunities to share their interests, skills, and abilities. It provides a vehicle for developing an acceptance of others differences and helps to build the family-like atmosphere of cooperation and understanding.

At the beginning of the year, teachers in the multi-age classrooms spend time discussing differences with the children. They discuss how everyone is of a different height, hair color and eye color. These differences are compared with differences in physical ability and academic ability. Competition is downplayed and cooperation among the students encouraged. The

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importance of different skills and abilities is stressed in these discussions, and children come to accept the different ages and abilities of class members as an important ingredient of classroom life.

After the date is presented and discussed, the children are excused to work on their math folders. One of the teachers calls each child by name and they pick up their math folders and find a comfortable place in the room to work.

Four tables are interspersed throughout the room and the children choose a place at one of the tables to work, or they choose to work on the floor. Each child has an individual math unit that is geared to his/her own developmental and skill level. Individualization of math allows the children to progress at their own rate.

Class math units are chosen that enrich concepts understood by all students, introduce concepts that none of the children have experienced, or extend the interdisciplinary units. Math homework is approached in different ways. One of the classroom teachers sends homework that involves enrichment activities and problem solving, activities that can be approached on a number of different levels. Another teacher gives two or three different choices in homework activities.

Students do not come into the classrooms as independent workers. Independent work skills are taught as the year progresses. Children learn to problem solve and seek answers from other students before involving the teacher. Problem solving skills are modeled by the teachers and children's efforts to use them are encouraged. Limited choice is given to the students as they learn to develop their own independent work habits.

The room itself is a bright, exciting place. The windows are covered with the children's watercolor drawings representing children in different American cultures. Life sized animals hang from the ceilings. Animals including the polar bear, Arctic fox and seal are represented. During the last interdisciplinary unit on the Arctic, the children researched different Arctic animals and created life sized models. In the present unit, one small group is writing a report about why the different cultural groups came to America, a second is preparing a play on prejudice and a third group is constructing dioramas showing the kitchens of people from the Amish culture.

The interdisciplinary units provide the class an opportunity to study the same subject, but allow enough breadth and depth for teachers to develop appropriate activities for all students. Student activities are based on their respective interests and academic needs. In a unit on space, for example, students chose to do an independent project about an aspect of space in which they were interested. Teachers developed project goals that match students' academic needs.

After group work, it is time for lunch and recess. The children go outside on the playground to eat and have time for free play. The students eat together as a class, another method of building a classroom community. Teachers do not solve problems for students on the playground until they have made an effort to find their own solutions. The problem solving skills developed in the classroom are extended to the playground and all aspects of school life.

When the children come back from recess, they have "story and relax" and then finish the afternoon participating in writing workshop. Writing and reading are individualized for the students in this way. Children participate in "peer conferences" that help develop their ability to evaluate their own work and to cooperate with other classroom members. At the end of writer's workshop, the students participate in "author's chair", which allows them to share their work in a nonthreatening atmosphere. It also provides another opportunity for students to share their interests and skills with other students.

At the end of the day, the students meet again in circle to discuss the day. They solve any problems remaining from the day and plan their activities for tomorrow.

Perceptions

Having examined expectations of participants in the multi-age classes and witnessed segments of classroom life through description of circle gatherings and classroom organization, we now explore the ways in which students, parents and teachers perceive multi-age grouping following the first year of implementation. Berger and Luckman (1967) write that knowledge is "socially

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constructed" from the multiple ways that experiences are interpreted by individuals (Bodkin & Biklen, 1992). Consequently, we examine the research questions from multiple perspectives.

1. How do parents, teachers and children understand multi-aged grouping?

> More than anything it means that children are given the opportunity to relate to others based on interest, talent and level of maturity rather than based on the single criterium of age (and chance).
>
> Parent of six-year old child

As with expectations, perceptions of students and parents centered on social/emotional issues rather than academic issues, perhaps due to the individualized nature of Ricks Center curriculum. Since academic needs are met through individualized curriculum delineated in Individual Educational Plans and achievement levels are varied even in classes with more homogeneous ages, multi-age grouping was understood as an affectively based decision. Second, parents know more about their children's social and emotional issues and teachers are more aware of academic areas. A parent of a student (age 6) writes, "The most difficult aspect for me related to social interaction. My daughter was the very youngest in the class and was keenly aware of that fact." Third, Ricks Center emphasizes a noncompetitive environment where students are not compared by receiving grades or having intra-class groupings by ability so parents are not as concerned about how their child performs academically in relation to other children. Children do not experience having to measure up to an established standard for all people their age, so they learn to accept that classmates do many different kinds of work and that each person has special areas of talent and expertise. Therefore, when we asked open-ended questions about multi-age grouping experiences, responses centered on affective issues.

One mother of an eight-year old student stated that the variety of ages among the children, "...increases the span of interests and decreases things that are considered 'not cool". Another parent of an eight-year old boy felt differently. She said that multi-age grouping forced six-year olds to do what seven and eight-year olds could do. She felt the older children dominated the class making it more competitive and introduced younger classmates to inappropriate language and behavior. One student who was among the older in her class expressed impatience with younger students and their "young behavior". Another child her age from the same class said she never felt that way and that she liked being with younger children.

All of the teachers observed that children made close friends across ages. One commented, "Kids make friends so fast!" Several parents observed that making friends is more difficult for adults and that breaking up same-age groupings to form multi-age classes caused "fall-out" in parents who became less active in class-related functions. One parent mentioned that it is difficult to establish close social ties between families with children of different ages because when they invite families over for social occasions, the children no interest in each other.

Teachers stated that the students were nicer to each other in unstructured time at school such as recess. One teacher recalled that she observed recess closely on the first day of school when all the primary children were on the playground together to see if children chose to play with friends from the previous year in same-age class or with friends in the new class. She discovered that almost without exception, children were staying with the new classmates regardless of the age difference between them.

One teacher understood multi-age grouping as a means to give children opportunities to try out different roles. She said that because children are not with the same classmates year after year they can avoid being "pigeonholed". She cited examples of students who seldom spoke in circle when grouped with age peers, becoming very comfortable in expressing themselves in a multi-age class where differences are highly valued and supported. Several younger children expressed great pleasure over being with older students they admired. One child who valued older friends because they could help her when she was stuck, admitted that sometimes she helped people older than she.

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For some children who are not natural leaders, being oldest in their class may be the only time they practice leadership tasks. Lorraine Bouchard writes in "Mixed Grouping for Gifted Students" (1991, p. 31), "...not all gifted children are natural leaders and for some age is the only advantage given them."

2. Is there congruency among parental, teacher and student perceptions of the multi-age classroom?

Teacher perceptions contrasted with how parents and students assessed the multi-age grouping model. Whereas teachers viewed students' experience broadly to include academic, emotional and social aspects, comments of parents and children centered on social consequences of multi-age grouping. Teachers reported student acquisition of leadership skills and growth in academic areas due to proximity to peers with similar interests, achievement levels and learning styles. Parents expressed concern about exposure of younger children to social sophistication of older children and their children's inability to make close friends due to age differences. Students said they had worried over separation from former classmates, but then had enjoyed making new friends of various ages.

In general, teachers perceived multi-age grouping more favorably than parents did. Teachers watched students make new friends rapidly, work successfully in classroom groups and solve problems as they arose. Parents tended to hear about isolated incidents and related their child's painful experience empathetically. Students made developmentally appropriate comments about specific, concrete points of time in the year such as the first day or specific incidents with fellow classmates.

Occasionally, a parent or student would express a perception that directly conflicted with the teacher's perception or even that of another child. For example, Peter (age 8) said that he had no friends in the class and whenever possible played with his friends from last year (age peers) when he was out at recess. His mother expressed regret that class schedules meant that Peter was seldom outside when the older children were. When teachers spoke about Peter, they said he preferred to play with a considerably younger child, Lee (age 6), when he had unstructured time. They observed that Peter avoided playing the highly competitive games of the older boys even when given an opportunity.

Another parent, mother of a six-year old daughter, had worried that her daughter would learn the ways of the older girls who were more docile and focused on pleasing people, felt her child became more compliant. The teacher of that class portrayed her older girls as strong females who chose to pursue their own ways regardless of adult persuasion.

3. Are commonalties in perceived level of success of individual students in multi-age classrooms related to age of child relative to the age-span present in the class?

Parents of children who were oldest in the classes were less likely to be pleased with multi-aged grouping than parents of children who fell in the middle or younger portion of the age range. Teachers perceived that the most significant problem with multi-age grouping is that parents and students continue to believe that students who are oldest in their classroom, or remain with the same teacher for a second year have failed to progress. One teacher explained that during the first year of implementation at Ricks Center, the multi-age grouping as it involved placement of older students actually was a deficit model. Whereas there were two classes of six, seven and eight-year olds, the third primary class was an age-homogeneous group of nine and ten-year olds. Therefore, parental perceptions of retention were at least partially accurate. Additionally several teachers stressed the need to inform parents about multi-age grouping during the year before their child enters the class so that they understand underlying reasons for this format and know criteria used for placement.

One teacher observed that some children need to be in multi-age classrooms for very

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different reasons. One boy (age 8) who was very able academically was socially immature. His mother states, "Max has some behaviors or issues that might stick out as problems were not other children at many levels as well. I sense a removal of expectations for a second grader, or second grade behavior--thank goodness, as I view that as a construct no child fits exactly."

In a different way, Lauren (age 7) needed a multi-age peer group. Lauren, as described by a former teacher, was a quiet, compliant child who is timid about expressing her ideas in a group. In a homogeneously grouped class the following year, her teacher reported that Lauren showed no comprehension of complex material and lacks the problem-solving sophistication of her peers. Yet in a multi-aged classroom, although she was among the older children, Lauren participated enthusiastically showing depth of thought. She, also, wrote complex, sensitive stories. Her former teacher from the multi-age classroom theorizes that Lauren required the constant nurturing acceptance of diversity characteristic of her previous classroom environment.

When children expressed their views of the best and worst effects of multi-age grouping, they stated the best part was making new friends and having nice teachers. Responses to the worst category were more varied, ranging from specific problems such as, "When I got hurt." and "The hard tiles (floor)" to "too long circle times" and "needing a teacher when she is busy." The latter observation was repeated by a parent of a younger child who spent time assisting in the classroom and reported that older students received less teacher attention "...as they (teachers) had to spend more time with younger children who needed them more."

A parent of a younger child in the class noted that the presence of varied ages "increased her child's range of interests and pursuits." Teachers felt the need for more training and experience in working with non-readers in a context of a majority of fluent readers.

Finally, Ricks Center teachers unanimously supported one outcome of multi-age grouping, the opportunity to have students for more than one year. Eames (1989) writes in a summary of research on multi-age grouping that, " two years within one classroom setting has advantages for learner and teachers, "...it alleviates much of the hurried pressure of traditional single gradedness." He continues,

> From a developmental standpoint the child has more time to grow; to learn about self; to be comfortable and simulate his environment...if a concept is too difficult to accomplish this year--with time, repetition and a working relationship the child will succeed next year."

Classroom teachers concur. Kim comments,

> It's rewarding to see the growth a child makes over time. I'm not sure you can see it in just one year. During the second year with a child, you can see the seeds you planted flourish and grow. It's nice to know where a child is academically at the beginning of a school year. You already have rapport established so you can start the real work of school much sooner.

Summary

On the whole, the understanding of multi-age grouping reflected levels of perception progressing from basic, rudimentary concepts expressed by students; through increasingly complex, but incomplete understanding of parents; to sophisticated, detailed explanations from teachers who designed and implemented the model.

Students understood the precise range of ages in their class, listing examples of younger and older students and placing themselves within the age span. Students indicated an initial concern about separation from former classmates, but when interviewed said they had enjoyed making new friends of various ages and interests.

Parents' responses varied from viewing multi-age grouping as an efficient use of limited

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instructional resources to providing peer teaching and leadership opportunities. Parents expressed initial concern about exposure of younger children to the social sophistication of older children and about older children having to tolerate immature behavior of younger classmates. Most of these concerns had disappeared by the end of the school year, however, and parents felt their children had benefited from the interactions with children of different ages.

Parents of children who were oldest in the classes were less likely to be pleased with multi-age grouping than parents of children who fell in the middle or younger portions of the age range. These parents felt that their children were not as challenged in the multi-age classroom as they might have been in a classroom of students of their own age and that their children lacked appropriate social opportunities.

Teachers perceptions contrasted with how parents and students assessed the multi-age grouping model. Whereas teachers viewed students' experience broadly to include academic, emotional and social aspects, comments of parents and children centered on social consequences of multi-age grouping. Teachers reported students' acquisition of leadership skills and growth in academic areas due to proximity to peers with similar interest, achievement levels and learning styles.

Implications for Practice

This research provides valuable program information regarding the formation and functioning of multi-age classrooms. Importance surfaces in three areas: implications for grouping gifted students in homogeneous and heterogeneous settings, description of design and implementation of multi-age classroom programs and significance of the qualitative design and implications for further research.

This research displays an educational setting in which multi-age grouping is used successfully as a format option for gifted primary age children. Children's academic and affective needs are met effectively in this multi-age environment. The literature indicates that gifted students need opportunities to work with other gifted and talented youth (Feldhusen, 1989). Multi-age grouping of gifted students at other sites will enable students of different ages to work together on a full-time basis rather than occasional pull-out classes. This grouping option may meet other educational needs of students. Paven (1992) and Cuban (1989) suggest that multi-age grouping is also an effective way to deal with underachievers and at-risk students.

The descriptions of criteria and methods used to determine placement, narratives of classroom functioning and information regarding individual students', teachers' and parents' experiences in implementing multi-age grouping display that it can be implemented effectively. Parents' and children's experiences delineate that the social-emotional area is one that must be addressed if multi-age grouping is to be successful, as this is the area in which most of their concerns were expressed. Teachers who work in multi-age setting must be well-prepared and flexible in approach. Time must be spent during the year teaching children to understand and appreciate individual differences, develop independent work skill and problem solving abilities. Teachers need training in working within a single classroom context with a wide range of abilities.

Most previous studies of multi-age classrooms have been evaluative and quantitative. Research paradigms designed to capture the total experience of classroom life must be used if education is truly to meet the needs of individual learners (Nutall and Alton-Lee, 1990). "The assumption of behind the story of any particular life is that there's something worth learning". (Peshkin, 1993, p. 25). Peshkin cites Geoffrey Wolfe:

One hopes that one's case will touch others. But how to connect? Not by calculation, I think, not by the assumption that . . . I have discovered a "universal condition of consciousness." One may merely know that no one is alone and hope that a singular story, as every true story is singular, will in the magic way of some things apply, connect,

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resonate, touch a magic cord. (1985, p. 72)

This research makes an essential contribution to the field by examining the experiences of participants using a descriptive, individual approach that is both theoretically grounded and practically applicable. The success of multi-age grouping depends on whether those involved perceive it as a positive experience, therefore perception are of the utmost importance. Research at the Ricks Center will be ongoing, and data continues to be collected from teachers parents and students to access how perceptions change over time. More qualitative research is necessary in the area of multi-age grouping.

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UNIVERSITY of DENVER

Ricks Center for Gifted Children
School of Education • Bureau of Educational Services
RICKS CENTER FOR GIFTED CHILDREN
1993-1994

The Ricks Center for Gifted Children is an exemplary program designed for gifted and talented preschool (beginning with three-year-olds) through eighth grade students. In cooperation with the Bureau of Educational Services and the School of Education, Ricks Center provides model program services to students who show exceptional, differentiated ability and learning needs. The philosophy of Ricks Center focuses on academic excellence and social/emotional development considering individual needs of the whole child.

Faculty members for this model program are certified professionals with training and experience in education of gifted students. The University of Denver's School of Education provides faculty consultants to assist in program development. Various teaching strategies are utilized to address specific learning styles, individual needs, and intellectual abilities. Thinking skills, including creative problem solving, critical and creative processes, and scientific method, discovery, exploration, questioning and high level cognitive skills such as analysis, synthesis and evaluation are incorporated into the daily learning environment.

Admissions for Preschool and Prekindergarten students is based on information supplied by parents and from informal, activity-based interaction with Ricks Center Early Childhood teachers. Admissions for older students, beginning with kindergarten, is based on demonstrated need defined through individually administered assessments determining general intellectual ability, specific academic talent, information processing style, levels of abstract conceptualization and parental perception. Assessment may be administered through the University of Denver, Bureau of Educational Services' Education Assessment Center or other professionals.

Areas covered in Ricks Center integrated classrooms include mathematics, science, reading, literature, language arts, social studies, history, foreign language and culture, computer science, affective development, critical thinking, visual and performing arts, physical education and independent study projects at age-appropriate levels. Assessment information and diagnostic activities are used to individualize the curriculum. Using curriculum based assessment, Ricks Center teachers develop individual goals and objectives which are written in an individual educational plan, then shared with parents in three conferences during the school year. Parents collaborate with teachers to plan strategies for accomplishing objectives in school and at home.

Ricks Center students have access to campus facilities. Physical education instruction is supplemented through University athletic facilities including the pool, gyms, fields and ice rink. Middle Level students may be involved in undergraduate classes or in study with University students and instructors. The daily school environment is enriched with guest speakers, field trips, community-based learning experiences with other activities.

Parental involvement is an essential component. Parents cooperate with teachers in educational planning for the child. As classroom volunteers, parents may become involved with the student publishing center, classroom celebrations, and trips. Conferences, monthly newsletters, annual social events for families and notes home facilitate parent and school communication. The Family School Organization presents monthly programs through volunteer activities, fundraising and social events.

This unique program provides an excellent opportunity for gifted and talented young children to explore and expand their abilities in a supportive environment. For more information, please contact Dr. Norma Lu Hafenstein, Director, or Nancy E. Jordan, Coordinator, Ricks Center for Gifted Children, University of Denver, 2040 South York, Denver, CO 80208, (303) 871-2982.

PARENT SURVEY

Thank you for agreeing to assist us in studying multi-age classrooms. The questions below are open-ended so that you can respond in any way that represents your experience with the primary classrooms this year. If you would like to discuss additional thoughts about the topic, but feel restricted by space in this format, please attach additional pages or indicate at the end of the form that you would like to speak with us. We are conducting individual interviews with a few parents and may be able to include you. Please call Nancy or Brooke with questions at 871-2982.

1. What does multi-age grouping in a classroom setting at Ricks Center mean to you?

2. What strengths have you observed in a classroom based on the concept of multi-age grouping?

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3. What weaknesses have you observed in a classroom based on the concept of multi-age grouping?

4. How did your initial perceptions about multi-age grouping change during the school year?

Please contact me for additional thoughts:

Name _____ Phone_____
Please return this survey along with your child's questionnaire to Ricks Center in the enclosed envelope by July 13. Thank you for assisting us in this project.

CHILDREN'S SURVEY

Brooke and Nancy are doing an independent unit for a class called Action Research. Remember your independent unit from school this year? Teachers also do research about topics. Our topic is something you know a lot about, multi-age classrooms, so you are the *experts*. We need to consult you. Your answers to these questions will help us write our report.

Please answer each item carefully. There is a small surprise for you on the last page to say thank you for finishing.

It is important to understand that there are not any answers that are better than others. The only right answers are the ones that describe how you truly feel about the statements because those are the ones that will assist us with our report.

This survey begins with a story.

Once upon a time there was a frog named Vera, who learned how to speak in **big** and small letters. She could say "**RIVIT**" when something was very important, and "rivit" when something was not as important to her. Once her friend Oswald offered her a large, juicy black fly. This was Vera's favorite food, so she said "**RIVIT**" When her mother asked her if she would like a snack of broccoli stalks, which Vera sort of liked, she replied, "rivit".

Would your please respond to the statements below like Vera did. Use **big** letter words for statements your really agree or disagree with and small letter words for statements your sort of agree or disagree with.

If you circle **YES!**, you really agree!
If you circle yes, you sort of agree.
If you circle no, you sort of disagree.
If you circle **NO!**, you definitely do not agree!

Here are two sample statements for practice:

A. If my friend asks me to go to Water World, I will be very sad.

YES!   yes   no   **NO!**

B. I love to do surveys!

YES!   yes   no   **NO!**

Did you circle **NO!** for statement A because you love to go to Water World, or did your circle no because you only sort of like to go? If you had trouble deciding how to answer B, come back to it after you complete the survey.

If you would like to tell us more than **yes** or **no** about a statement, please use another sheet of paper to write down any additional ideas.

Now you are ready to respond to the important statements about your classroom.

1. In my class this year, there were kids who liked the same things I did.

    YES!   **yes**   **no**   **NO!**

2. In my class this year, there were kids who did the same kind of math that I did.

    YES!   **yes**   **no**   **NO!**

3. In my class this year, there were kids who read the same kinds of books that I did.

    YES!   **yes**   **no**   **NO!**

4. I liked having choices about how I did my work this year.

    YES!   **yes**   **no**   **NO!**

5. I felt confused when I had choices about how to do my work.

    YES!   **yes**   **no**   **NO!**

6. When I had choices about how to do my work, most of the time I figured out what to do.

    YES!   **yes**   **no**   **NO!**

7. Most of the time, my teachers understood what I needed.

    YES!   **yes**   **no**   **NO!**

8. I felt like I was ahead of everyone in my class in some things.

    YES!   **yes.**   **no**   **NO!**

9. I wish there had been more kids in my class who liked the same things I did.

    YES!   yes   no   **NO!**

10. Sometimes I felt unhappy because teachers didn't understand what I needed.

    YES!   yes   no   **NO!**

11. I wish there had been more children close to my own age in my class this year.

    YES!   yes   no   **NO!**

12. It was hard being separated from my friends from last year's class.

    YES!   yes   no   **NO!**

13. I liked having kids of different ages in my class this year.

    YES!   yes   no   **NO!**

What I liked best about my classroom:

What I liked least about my classroom:

Please call me because I have more to tell you.

Name_____ Phone Number _____