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Examining the Literature on Authentic Montessori Practices: Multi-Age Groupings

AMS Research Committee White Paper

by Barbara Ervin and Christine Sacerdote, Ed.D.
Angela K. Murray, PhD, AMS Research Coordinator, Editor

This AMS Research Committee white paper series summarizes mainstream education literature related to authentic Montessori practices. Maria Montessori's theories developed 100 years ago resonate with current psychological research on improving education. This series highlights key Montessori practices outlined by Rambusch and Stoops (2002) in *The Authentic American Montessori School: A Guide to the Self-Study, Evaluation, and Accreditation of American Schools Committed to Montessori Education* and links them to contemporary educational literature.

Background

Broome in his study in multi-age art education stated, "Multi-age classrooms feature the purposeful grouping of students from two or more grade levels in order to form communities of learners" (p. 167). Up until the beginning of the twentieth century American public schools were primarily one-room school houses in which a single teacher taught all levels, but as rural agrarian society shifted to a largely urban, industrialized model, our schools changed as well. The model for these changes was the same factory model which had transformed our economy.

Schools organized around single grades were seen to be more efficient and were able to be managed using the same principles employed in the workplace because "Graded models offer an economical system that is easier monitored and organized by educators" (Broome, 2009, p.168).

In Montessori schools, however, this trend toward single grade education was not adopted. From the inception of the first Casa dei Bambini in 1907, which housed children ages three through six in a single classroom, Montessori schools have been organized into multi-age classrooms (Montessori, 1967). As the Montessori curriculum grew to encompass older and younger age levels, children were grouped into three year age spans aligned into Montessori's theory of child development. Traditionally, these are 0 - 3 (infant/toddler) 3 – 6 (early childhood) 6 – 9 (elementary I) 9 – 12 (elementary II) 12 – 15 (secondary I) 15 – 18 (secondary II). McNichols (1992) explains that the Montessori "educational method is built on the idea that education must be developed to meet the specific needs and sensitivities of each age" (p. 41).

Supporting evidence for multi-age grouping comes from both Montessori and mainstream education. There exists a one hundred year record of successful multi-aged educational practice

in Montessori schools. Small numbers of non-Montessori public schools have experimented with multi-aged grouping as well, and offer insights into its advantages. Evidence of the benefits of mixed aged classrooms can be organized into the following categories: its impact on children's cognitive development, its impact on their social development and the pedagogical advantages it affords teachers.

Cognitive Development

Studies have demonstrated that multi-aged classrooms have a positive impact on cognitive development. Paula Carter (2005) in her article "The Modern Multi-Age Classroom" compared Developmental Reading Assessment levels of third graders who had been in the multi-age classroom for two years to those with similar demographics who entered the school as new third graders. She reported, "Students who had spent the two previous years with us scored in the fluent range on average, whereas the new group of entering third graders scored in the transitional range" (p. 58). She further elaborated "This year, some of our first graders' developmental reading assessment scores already surpassed the scores of many of the third graders who were new to our class" (p.58). Lillard (2005) stated children in the multi-age classrooms showed a marked improvement over the year versus children in the single aged classroom in terms of motor, cognitive, communication and overall development.

We present two possible explanations for these advantages in multi-age classrooms. First, younger children are exposed to the vocabulary of older children, can observe the work and lessons of the older aged children and have the opportunity to interact with them. Older children, then, have the opportunity to become leaders and teach. Montessori (1979) explained that the learning opportunity for the older children to teach helps them understand what they know "even better than before" because "older children have to analyze and rearrange their little store of knowledge before they can pass it on" (p. 227). Thus, one of the advantages in terms of achievement is how peer teaching is a natural part of the classroom when comprised of mixed ages.

Second, multi-age groupings foster academic success at both ends of the cognitive developmental spectrum. Kappler and Roellke (2002) stated "A child who is advanced academically but behind socially (and vice versa) can take advantage of the diverse peer resources available in a multi-age classroom" (p. 167). Lloyd (1999) reviewed research on the influence of multi-age classroom environments on high ability students. She reported that, "…arrangements most likely to have positive and significant results are those where the curriculum is differentiated" (p. 187). In these situations teachers may be "more likely to see their students as diverse than as similar and to provide developmentally appropriate (that is, differentiated) curricula" (p. 187).

Gerard (2005) summarizes these benefits by explaining that effectively teaching "children of widely varying levels requires interactive curriculum experiences, fluid grouping strategies, and individualized planning" (p. 243). Kappler and Roellke (2002) point out the value of this diversity in mixed age classrooms saying, "One of the strongest appeals of these classes may be that variation in student ability and interest is the norm rather than the exception" (p. 167). All of these are hallmarks of the Montessori Method.

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Social Impact

Broome stated, "In the case of attitude, students were found to have both a better attitude toward school and a better self-concept in over 75% of the studies that were reviewed" (p. 170).

The practice of grouping students in a three year age span allows children who need extra time to learn a concept to have that time. In single age classrooms children who need additional time to master concepts are faced with the possibility of retention at the end of the year. Broome stated that studies show "… retained students have greater failure rates and lower self-esteem, while the retention itself has had no impact on student achievement" (p. 169). Children in mixed age classrooms are able to avoid the stigma of retention, stay with their peers, and continue to work at their own academic level. Kappler and Roellke (2002) concur explaining that multi-age classrooms allow students to avoid "feeling different" if they excel or fall behind in any particular subject.

The social advantages of multi-age grouping are similar to those we see in the large family. Older children help younger children, and in doing so, gain a sense of purpose. Kappler and Roellke (1999) noted the additional benefit of older students modeling appropriate classroom behavior and social interactions for younger students.

As Montessori so eloquently stated, "The charm of social life is in the number of different types that one meets. Nothing is duller than a Home for the Aged. To segregate by age is one of the cruelest and most inhumane things one can do, and this is equally true for children" (p. 226). Broome agreed with Montessori with the following statement: "Strict segregation by age is rare in society; except in summer camps or schools were such segregation may benefit the adults who organize these institutions" (p.168).

Pedagogical Advantages

The teacher in a multi-age classroom has the advantage of knowing the children and their families for multiple years. This provides the teacher with unique insights into the developmental arc of each child. The first days of school are spent in orienting a handful of new children to classroom procedures, with the assistance of the returning students. Fu et al (1999), noted that teachers at the beginning of the "second year all remarked how much easier it was to start the year in the multi-aged classrooms than it had been when they welcomed a whole class of same-age students" (p. 74). They went on to explain "One way or another, within the first 10 minutes of school each kindergartener had someone older to watch, be with, and question if the need should arise" (p.75). As Montessori (1979) explained, the mother of six has an easier time because she is dealing with different ages and different needs with the older children helping with the younger children. In a similar group of children of the same age, they are all likely to want the same things at the same time.

Furthermore, when children are able to observe and interact with the older children they become motivated to learn. This in turn minimizes the need for behavioral intervention that would disturb the teachers instructional time (Lillard, 2005).

Conclusion

The multi-age grouping in the Montessori classroom replicates family-like interactions. Children are able to work collaboratively, interact with peers, and find their place in the social community.

> The child's progress does not depend on his age, but also on being free to look about him. Our schools are alive. To understand what the older ones are doing fills the little ones with enthusiasm. The older ones are happy to teach what they know. There are no inferiority complexes, but everyone achieves a healthy normality through the mutual exchange of spiritual energy. (Montessori, 1979, p. 228)

The full three year age range ensures there is enough diversity of age and ability so all children are free to be themselves.

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