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## Montessori Middle School: The Erdkinder

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### Abstract

Montessori Education is over a century old. Since its inception, Montessori schools have been opened worldwide. While most are pre-schools serving three- to six-year-old children, many people are not aware that Montessori spoke and wrote about middle level education before her death in 1952. Her concept for the Erdkinder, an intentionally designed learning environment for the adolescent ages 12 to 15, is described in this essay.

*If puberty is on the physical side a transition from an infantile to an adult state, there is also, on the psychological side, a transition from the child who has to live in a family, to the man who has to live in society. These two needs of the adolescent: for protection during the time of the difficult physical transition, and for an understanding of the society which he is about to enter to play his part as a man. (Montessori, 1973 [1948]), p. 60*

### Introduction

Montessori's words are echoed throughout the the Association for Middle Level Education's (formerly National Middle School Association) (NMSA, 2010) guide, *This We Believe*. The purpose of both Montessori's writings and the *This We Believe* are to describe an intentionally created learning environment designed to support the adolescent psychologically, physically and socially. This article seeks to elucidate Montessori's design for the *Erdkinder*, the name she gave to her theorized adolescent program, and link them to 21st century ideas of middle level education as detailed in *This We Believe*. The goal of this article is to suggest that the *Erdkinder* is a model of middle level education that incorporates the tenets proposed by the Association for Middle Level Education.

### Montessori Education

#### History of Montessori Philosophy

Any discussion of Montessori education must start with a brief history of the development of Montessori philosophy and pedagogy. Maria Montessori opened the first Casa dei Bambini in 1907. The school served children two to five years old in the San Lorenzo district of Rome which housed families who worked in nearby factories (Standing, 1998). Montessori went on to open schools and training programs all over the world. She continued to refine the Montessori method and expand it beyond

preschool. With the help of her son, Mario, she designed programs for elementary school-age children, infants and toddlers. Foundational to the development of these programs was the idea of the prepared environment. She believed strongly that children could develop their intellect best in environments that were designed for their psychological, intellectual and spiritual needs (Montessori, 1973 [1948]). She and her collaborators paid great attention to the needs of children in three distinct planes of development (defined by Montessori as 0-6, 6-12 and 12-18).

#### Planes of Development

**The first plane.** This plane of development (ages birth to six), Montessori observed that children moved through sensitive periods that helped them understand and conquer their physical world. The focus of this plane was to develop the senses and develop both fine and large motor skills with the main goals of this stage being care of self, development of the senses and understanding of the basic tenets of mathematics, language, the sciences.

**The second plane.** This plane (ages 6 to 12) was dominated by the development of mental capacities. These years were marked by steady physical growth and rapid transformation from concrete to abstract thought. The goal of this period was to develop creatively and intellectually. This was a sensitive period for

both culture and imagination. However, it was the third plane of development (ages 12 to 18) that Montessori believed was a special time of great upheaval (Montessori, 1973 [1948]).

**The third plane.** Montessori believed that the third plane was crucial because adolescents experience both tumultuous physical and mental development. Physically, adolescents navigate changes in their bodies that prepare them for full maturity. Uneven and rapid growth in limbs puts individuals at risk for injury. Hormones regulate the development of secondary gender characteristics. In addition, this uneven development happens internally. While the brain prunes unused connections starting from the back of the brain, the prefrontal cortex continues to develop. Studies show that while these sections of the brain are pruned, adolescents may use their amygdala to make decisions rather than the prefrontal cortex (Craik & Bialstock, 2006). The result is reactions to situations that are less governed by planning and using past experience. These amygdala-governed reactions are informed by emotions and quick reactions much like the “fight-flight-freeze” responses most associated with this part of the brain (Steinberg, 2008). As the body and brain develop, the individual works towards the main goal of this plane of development. Montessori believed that this was the sensitive period for moral development and that the goal was the discovery and implementation of the cosmic task or individual purpose.

### **Development of the *Erdkinder***

Toward the end of her life, Montessori wrote and spoke about the needs of the adolescent; however, she died before she could design or implement her ideas for the middle school. After her death, Montessori-trained educators, such as Coe, developed the *Erdkinder* based on lectures and papers Montessori produced between 1948 and 1952 (Coe, 1988). Coe (1988) describes the process she used to develop the Montessori adolescent program which drew on Montessori’s writings, as well as Kohlberg’s theory of Moral Development and Erikson’s stages of development. Coe (1996) detailed the strategies and practices which enabled teachers to form community within their school environments. She also included refinements implemented at the School of the Woods where she began a middle school program in 1986. Coe (1988) reflected on the challenges faced by adolescents as they begin to define themselves

not only in small peer groups but within a larger school community. The push and pull both toward and away from peers and family is unique to adolescence. Dr. Montessori observed this in her writings (Montessori, 1973 [1948]). The adolescent program contains the same hallmarks as the previous learning environments created for younger children. Students are given choice in their intellectual pursuit, work towards mastery and create community. The change between this stage and the previous is a broadening of the scope of the notion of community from school to neighborhood, city, government and world.

### **The *Erdkinder* and *This We Believe***

In summarizing Montessori’s writings about the adolescent (Montessori, 1973 [1948]) and Coe’s descriptions about the development of the first *Erdkinder* (1996), many parallels can be drawn to the 16 characteristics of the ideal middle level learning environment proposed in *This We Believe*.

### **Thoughtful Preparation of the Teacher**

Montessori teacher training is grounded first in understanding the planes of development and second in preparing the teacher to support the underlying goal of each stage. Preparation of the teacher or guides, as Montessori called them, was highlighted in her writings about learning environments. Montessori believed that there was a special relationship between the child and the teacher. The guide was not there to deliver instruction or dispense knowledge. As described below, Montessori believed that the adult must be sensitive to the needs of the child in the learning environment.

*Now the adult himself is part of the child's environment; the adult must adjust himself to the child's needs if he is not to be a hindrance to him and if he is not to substitute himself for the child in the activities essential to growth and development. (Montessori, 2005, p. 106)*

NMSA (2010) calls for the same type of preparation for teachers in all three general categories of the 16 characteristics of middle level education. *This We Believe* calls for middle level educators to value young adolescents, be prepared to teach them and be advocates. Thus, teacher education for middle level educators must include supports to help candidates

develop these characteristics. This mirrors Montessori's notion of the adult adjusting to the child's needs.

## Instructional Practices

### Personalized learning.

Personalization refers to instruction that is paced to learning needs, tailored to learning preferences, and designed to include the specific interests of different learners. In an environment that is fully personalized, the learning objectives and content—as well as the method and pace—may all vary (United States Department of Education, 2010). This learning strategy is a foundational characteristic of Montessori methodology and practice.

Support for personalized learning is further corroborated by domestic and international studies. Studies on Montessori practice (Dohrmann, 2007; Hanson, 2009; Hobbs, 2009; Peng, 2009) include the same learner-centered approaches such as differentiated instruction and auto-education cited in general education studies (Alfassi, 2004; Weinberger & McCombs, 2001). These findings are also found in Self-Determination Theory literature which point to a possible positive correlation between autonomy supports and student achievement (Chirkov, 2009; Chirkov & Ryan, 2001; Niemic et al., 2006; Shih, 2008; Soenens & Vansteenkiste, 2005).

While specific learning practices are not described in *This We Believe*, there are a few characteristics that point toward personalized instruction. Because personalized learning includes the learning style and academic needs of the student, it answers the NMSA (2010) call for curriculum that is challenging, exploratory, integrative and relevant. Project-based learning, an instructional learning strategy of personalized learning, is relevant to a student's interests, integrated across curricular areas and is targeted to students' academic needs. The emphasis of personalized learning through student-designed projects in the Montessori *Erdkinder* (Coe, 1996) suggests that this learning environment meets the NMSA's guidelines for instruction at the middle level.

**Differentiated instruction.** Another key to success for all students is the inclusion of differentiated instruction. Mastery-based learning and auto-education, longtime components of Montessori methodology and

practice, provide a time-tested model which is supported by the National Technology and Education Plan (Thomas, 2016). Differentiated instruction refers to instruction that is paced to the specific needs of students. Learning goals are the same for all students, but individuals can progress through the material at different speeds according to their learning needs. For example, students might take longer to progress through a given topic, skip topics that cover information they already know, or repeat topics they need more help on (United States Department of Education, 2010).

A case for the inclusion of differentiated instruction as a way to meet the characteristics of the NMSA (2010) can be made based on the call for curriculum that supports active, purposeful learning. Students engaged in differentiated instruction are more active because they are presented with challenging concepts when they are ready. The learning is purposeful because it focuses on meeting individual needs. This is supported by studies of differentiated instruction which point towards increased student engagement and achievement (Haymon, 2019; Norton, 2019).

## Creating Caring Communities

Domestic and international studies point toward a positive correlation between increased relatedness and student achievement (Goddard, Salloum, & Berebitsky, 2009; Jang, Reeve, Ryan, & Kim, 2009; Roessingh, 2006; Sahlberg, 2007). Dr. Montessori's writings, as well as articles written by current Montessorians, detail and illustrate the importance of building relational trust to creating an authentic Montessori learning environment (Coe, 1996; Enright, 2008; Gillespie, 1994; Montessori, 1973, reprint of 1948 original; Rule & Kyle, 2009). These practices can occur if teachers have the will to provide these structures and the support to do so. These small changes could have a big impact on student motivation and achievement.

Building caring communities is also cited in *This We Believe* (NMSA, 2010). The middle level characteristics include organizational structures that foster meaningful relationships and a school environment that is inviting, safe and supportive of all. The focus on building relationships between all community stakeholders creates an environment that is prepared for students to succeed academically and socially.

## Supports Unique to the *Erdkinder*

As illustrated in the previous section, there are several Montessori practices and features of the *Erdkinder* that can be directly linked to the characteristics proposed for optimal middle level learning environments by the NMSA (2010). There are some practices and strategies that while, not directly linked to elements cited in *This We Believe*, can be indirectly linked to secondary education and could possibly be considered for middle schools.

**Valorization.** Throughout her writings, Montessori talked about the dignity of children. In each plane of development, the work that children did gave them the ability to conquer the specific challenges of each stage. In the third plane of development, this concept is given the term *valorization of personality*.

*...derive great personal benefit from being initiated in economic independence. For this would result in a "valorization" of his personality, in making him feel himself capable of succeeding in life by his own efforts and on his own merits, and at the same time it would put him in direct contact with the supreme reality of social life. We speak therefore of letting him earn money by his own work. (Montessori, 1973 [1948], p. 65)*

As adolescents develop their own plan of study, projects and role in the community, they begin to see their own capacity and ability to determine their future. The dignity they gain from these pursuits gives them the ability to set their own course and to determine their own destiny, which Montessori saw as the special challenge of the third plane (Hoglund, 2006).

While *This We Believe* does not propose that students develop their own plan of study, projects or role in the community, there are some indirect links in the framework. Under leadership and organizational characteristics, the NMSA (2010) calls for a shared vision developed by stakeholders. This would suggest that active participation by the stakeholders who have most to gain by shared visions, the young adolescents themselves, could only enhance and increase the success of the community. As mentioned under personalized learning, developing a plan of study and projects speaks towards curriculum that is active and purposeful.

## Supports for Economic Independence

Montessori (1973 [1948]) describes the environment for the adolescent. This included land and a farm. She believed that this would allow opportunities for physical exercise which would include working on the land to establish and maintain the farm. In addition, the farm would yield animal and plant products to sustain the community. Surplus goods would be sold to the surrounding community. Adolescents would develop and manage this business which would establish economic independence. Because the third plane, ages 12-18, was the last plane before adulthood, Montessori wanted to ensure that graduates were prepared. Economic independence was one of the ways the adolescent would be valorized.

While the type of student-developed and student-managed entrepreneurship programs proposed by Montessori are not common in middle level education, recent literature examining the effects of similar programs at the high school level points towards increased student achievement (Doucet & Hiatt-Michael, 2011) and increased feelings of self-worth (Byrd, 2019)—both outcomes described by Montessori. Doucet and Hiatt-Michael (2011) examined academic achievement data in the form of graduation rates, college attendance of recent participants of a high school entrepreneurship program in inner-city Los Angeles. They found both increases in graduation rates and college attendance. Byrd (2019) completed a qualitative study involving graduates of a high school entrepreneurship program. Participants shared their experiences and its effects post-graduation. Among the major findings were feelings of ability to solve real-world problems and a belief that they could conquer challenges in their future. These high school graduates echo what Montessori hoped for from graduates of the *Erdkinder*. Montessori describes the third plane as including ages 12 to 18. Young adolescents enter high school at 14, well within the same developmental plane as their counterparts in middle school. Based on these parameters, it is possible that implementation of entrepreneur programs at the middle level could garner the same increases in academic achievement and feelings of self-worth.

## Conclusion

Montessori proposed a prepared learning environment that includes many of the essential

attributes described in *This We Believe* (NMSA, 2010) as well as a few innovations that are related to them. As discussed in Montessori's writings and the NMSA position paper, personalized learning and differentiated instruction support student learning and create a learning environment where students are encouraged to innovate. While *valorization* is a unique Montessori term, the concept has roots in some of the NMSA's (2010) characteristics. Specifically, the NMSA encourages curriculum that supports purposeful learning which is similar to Montessori's focus on student developed plans of study and project-based learning. Valorization through meaningful input into community practices and self-determined roles within this organizational structure is much like NMSA's call for shared vision developed by all stakeholders. This valorization is furthered by student run businesses in the *Erdkinder* which help young adolescents gain economic independence. While not included in *This We Believe*, recent studies of high school graduates who participated in entrepreneurship programs point to possible increases in student achievement (Doucet & Hiatt-Michael, 2011) and self-worth (Byrd, 2019). Based on the fact that middle level students are in the same developmental plane, it is possible that these gains could be seen if similar programs were implemented. Personalized learning, differentiated instruction, and supports for valorization make the *Erdkinder* an optimal middle level learning environment much like the one proposed in the NMSA's *This We Believe*.

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