

EXECUTIVE FUNCTION SKILLS IN YOUNG CHILDREN

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The academic media is full of references to *executive function*. I can pretty much guarantee that Maria Montessori never used that term—but she would be right at home with this current academic thinking.

Just what are executive function skills? And why are they important to children between the ages of two and six? Basically, executive function skills are the "how" of learning. They are the skills children (and adults) need for the learning process to succeed:

- analyzing
- planning
- organizing
- focusing
- adjusting
- remembering

Research shows that these skills begin to develop shortly after birth, develop quickly through age five or six, and max out in early adulthood.

The good news for us is that the Montessori curriculum has always been aligned with developing these very same skills.

In fact, there is a Montessori term associated with these skills that can sometimes be confusing to parents: *normalization*. Maria Montessori described it this way: "Normalization is the single most important result of our work." She went on to say that normalization is the foundation upon which "spontaneous discipline, continuous and happy work, social sentiments of help and sympathy for others..." arise.

To put that in more modern language, I would say that normalization is what happens when children are free to choose meaningful work in a structured environment, and the work provides child-friendly materials and activities that engage the child's attention.

Think about the WSMS classrooms: calm, structured, organized, and peaceful.

- Children are encouraged to **work independently** in areas of their own choosing, and guided/encouraged to explore new areas.
- In class meetings, children quickly learn to **focus attention** on the person who is speaking, and **wait** until they are acknowledged to contribute their own thoughts.
- When a teacher (or classmate) demonstrates a new work, children **learn the specific steps**—and the **order** of those steps—to accomplish it.
- They learn the daily schedule, and from that knowledge they can **prepare** for each next stage of the day, and also learn how to **adapt** if the schedule changes.
- They learn to **wait** until a classmate finishes a work and puts it back carefully on the



appropriate shelf before they may use it. And they come to recognize that related works may be successively more complicated or difficult—so they develop the skills to **deal at each more complex level**.

- They work independently on some projects and in **partnership** with peers on others. Montessori mixed-age classrooms provide the opportunity to learn from more experienced classmates and mentor younger ones.

Montessori teachers are comfortable allowing children to make mistakes and to learn from them, to provide guidance, and to intervene only if a situation requires adult support. So children learn that it's okay when things don't work the first time, that they can try again or use a different approach, that they can seek help. They develop pride and confidence and independence.

And all this happens when they are two, three, four and five years old.



What happens after that?

Our children move to ongoing schools having learned key strategies for success: they are respectful of others, organized in their approach, willing to make mistakes in trying to solve a problem. They can work independently, and are comfortable asking for help when they need it. They work happily in small groups with other children and take leadership roles when appropriate. And they continue to develop their executive function skills, albeit at a slower pace.

A study summarized on the web site of the Harvard Center on the Developing Child declares: "Research on the developing brain shows us that early childhood experiences build the foundation for a skilled workforce, a responsible community, and a thriving economy. ... When children have had opportunities to develop executive function and self-regulation skills successfully, both individuals and society experience life-long benefits."

To quote Seneca the Younger (in *Moral Letters to Lucilius*, AD 65): "non scholæ sed vitæ discimus," or "Not for school, but for life, we learn."



Resources:
Chitwood, Deb. What Does the Montessori Term "Normalization" Mean? April 23, 2013. <http://livingmontessori-now.com/2013/04/23/what-does-the-montessori-term-normalization-mean/>

Enhancing and Practicing Executive Function Skills with Children from Infancy to Adolescence. http://developingchild.harvard.edu/resources/tools_and_guides/enhancing_and_practicing_executive_function_skills_with_children/

Executive Function: Skills for Life and Learning. http://developingchild.harvard.edu/index.php/resources/reports_and_working_papers/working_papers/wp11/

Galinsky, Ellen. *Mind in the Making: The Seven Essential Life Skills Every Child Needs.* 2010.

Galinsky, Ellen. *Neuroscience Improves Early Childhood Education Quality.* <http://www.mindinthemaking.org/neuroscience-improves-early-childhood-education-quality/>

Montessori, Maria. *The Absorbent Mind.* Quoted in *What is Executive Function? Montessori Perspectives Part 2 of 3.* May 17, 2012. <http://montessoritraining.blogspot.com/2008/04/stages-of-normalization.html#.VPTJUF82U>

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MIMI'S TIPS: ANYTIME & ANYWHERE

Your children are developing their executive skills all the time, not just at school. So what can you do as a parent to foster this? Here are some ways to take advantage of little opportunities throughout your day:

IN THE KITCHEN

- Have accessible drawers/shelves for snacks, utensils, and napkins, so kids can help themselves and help you
- Let kids make their own snacks—sandwiches, cut fruit or veggies—using kid-size tools
- Help with cooking: measure/pour liquids, slice eggs, butter toast, grind spices, count ingredients, follow directions

IN THE BEDROOM/PLAY AREA

- Have accessible shelves for clothes, toys, learning materials—not catch-all drawers or toy boxes—so they learn to sort and organize
- Label things like drawers and containers; when they learn the letters have them make new labels
- Rotate toys so your child is not distracted by too many options
- Post a bulletin board and/or white board for messages and display
- Play music
- Use an analog clock and point out the connection between the hands of the clock and numbers
- Do puzzles of increasing complexity
- Play sorting games: size, shape, color
- Ask your child to tell a story or describe what he or she is doing
- Encourage imaginary play based on

activities in your child's life: going to the doctor, visiting grandparents, being the teacher

IN THE BATHROOM

- Wash in a particular order: toe to head, left side/right side
- Tell stories
- Sing songs that require counting (*Five Green and Speckled Frogs*) or repetition (alphabet, *The Wheels on the Bus*, *Found a Peanut*)

OUTDOORS

- Throw and catch balls
- Run up and down an incline
- Walk on a balance beam or straight line, foot after foot
- Take turns in games, in using equipment
- Play games that require decisions on activity levels: freeze dancing; *Ring around the Rosie*; *Motorboat*, *Motorboat*

The key is to take advantage creatively of interactions wherever you are: on the bus, in the living room, at Grandma's. Every interaction has the potential to concentrate attention, learn self-control, and stimulate creativity within structure.

And one more thought: research has shown that being bilingual can contribute to the development of executive function skills. So, if you are fluent in more than one language, use them in your conversations: your child will benefit in more ways than one!