

Education

Update

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Hands-On, Hands-Off

How Montessori Education Finds Balance

At first glance, the tower of pink wooden blocks looks uncomplicated, like any other child's toy. But these blocks aren't just meant for stacking. Eventually, they will be used to learn about depth perception, cubing, and even the decimal system.

The "Pink Tower," as it's called in Montessori schools, is part of a meticulously orchestrated program of materials, curriculum, classroom setup, and freedom of choice that is dedicated almost exclusively to hands-on learning.

As traditional schools set out to incorporate more hands-on learning under the Common Core standards, they can gain insight from an alternative education system that has been perfecting the practice for nearly 100 years.

What Is Montessori?

In the early 1900s, Italian physician and educator Maria Montessori began working with disadvantaged children in the slums of Rome. She became fascinated by how they independently absorbed knowledge from their surroundings and set out to create a sensory-based learning environment that would support this natural curiosity.

Montessori opened the Casa dei Bambini in 1907, and today, according to the National Center for Montessori in the Public Sector (NCMPS), the United States has an estimated 5,000 Montessori schools, 500 of which are public.

"It's such a different way of thinking about teaching and learning," says Jackie Cossentino, a senior associate at NCMPS. "It's the idea that students learn best when they have long, uninterrupted blocks to work in, and that they have a lot of choice—though not complete choice—as to what they work on, when they work on it, with whom they work on it, and how long they work on it. It's just not the way schools are [typically] run."

The Prepared Environment

What makes a Montessori classroom operate differently than a traditional classroom, according to Cossentino, is that the "structure is embedded in the environment." The "Prepared Environment," in this case, is the physical setup of the classroom and the materials that fill it.

As Emily Bazelon wrote in a 2007 *Slate* article, "Montessori isn't magic. It's fine-tuned and detail-driven and tactile, like a workshop for two dozen good-humored but serious young elves."

Almost every element in this workshop is deliberately planned. Posters and art (which are few) are hung at children's eye level and the furniture is child-sized and neutral in color so it doesn't detract from the allure of the learning materials.

Classrooms include five station-like areas devoted to language, mathematics, sensorial



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learning, the “Practical Life” and cultural studies. Seating, which includes carpets as well as tables and chairs, is positioned for individual and small-group pairings. Each area is equipped with a set of concrete, sequential learning materials, and classrooms include students across a three-year age span.

Several distinctions exist between a Montessori material and a traditional hands-on manipulative, explains Nikki Moody, head of the lower program at Barrie School in Silver Spring, Md. To be considered Montessori, a material has to be “intentionally inviting” through its color, weight, shape, and size. For example, traditional Montessori materials are made of wood so children can feel their weight and differences in texture. A Montessori material also has to be “self-correcting” in that it can only be used in a specific way and requires little adult oversight. Finally, it has to be “multi-faceted,” with many uses in terms of learning.

Nancy Rawn, a teacher at Annie Fisher Montessori, a public magnet school in Hartford, Conn., says the Common Core has “Montessori written all over it.” Montessori students are accustomed to working with objects, building hands-on models to calculate mathematical concepts, and otherwise physically engaging with the world around them.

Although students have the liberty to choose which activities they participate in on a given day, the way that they interact with the materials is calculated. “Students can’t just pick anything off the shelf and play with it,” explains Cossentino. “The teacher gives a lesson on how to work with the material, and once the material (or work) has been presented, a student may engage with it for as long as she or he wishes. Most students work until they have mastered the material.”

A Dose of Reality

Montessori students also interact closely with their environment. A major part of the early grades is dedicated to teaching students “practical skills.” Instead of playing with a toy kitchen, for instance, students bake muffins in real kitchens.

“It goes back to the developmental bent of Montessori, that children like doing real things even more than they like doing pretend things,” says Cossentino. “When a child is making a real cake that they’re going to then eat and serve to their friends, they get to see the full impact of their effort. It’s the complete package of learning.”

Good life habits are instilled early: Students as young as 3 are tasked with wiping down tables, caring for classroom plants or pets, and even arranging flowers to keep the classroom orderly and aesthetically pleasing.

“As children get older, these habits become ways of demonstrating respect and community,” notes Cossentino.

Another hallmark of Montessori learning is that it

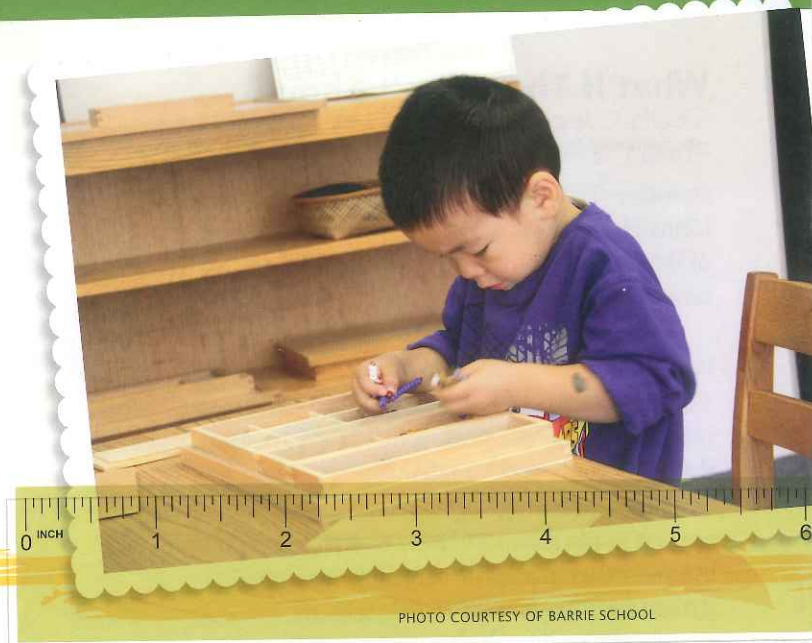


PHOTO COURTESY OF BARRIE SCHOOL

extends to the outdoors. Barrie School in Maryland uses its 45-acre campus as a “seamless gateway between the indoor and outdoor classroom,” says Head of School Charlie Abelman. “Instead of learning about the shapes of leaves in botany from the Internet or in a book, students can go on a hike and identify the leaves that they’re seeing,” adds Moody.

The Teacher as a Guide

Although the learning is hands-on, Montessori teachers are notoriously hands-off. “People have likened it to spinning plates: you have each child going in their own direction” and you have to sustain the momentum, says Rawn.

A typical day in Rawn’s classroom may have 20 minutes of whole-group instruction. Her students, who range in age from 8 to 13, spend most of their time working in small groups. Rawn, as the teacher or “guide,” moves throughout the room, observing students and counseling groups and individuals.

“Sometimes, there can be an illusion that the adults are not involved, but we are the holders of the curriculum and the scope and sequence,” explains Rawn. “We’re there to guide the children based on what we observe about their developmental needs.”

Project-Based Learning

The majority of Montessori schools house students from preschool to grade six, but a number of secondary programs devoted to project-based learning are emerging. Letting students’ passions steer the direction of learning is essential to Montessori at all levels.

If a student is obsessed with sharks, for example, the teacher may try to gather peers who are also interested in the

Hands-On, Hands-Off

→ continued from page 3

topic and have them work on a project collaboratively, says Moody. The teacher will then set parameters to make sure that the project is age-appropriate and rigorous, and that the students are hitting their academic content.

“We think in the direction of ‘how can kids take charge of this,’ rather than [assignments] always coming from the top down,” adds Rawn. Well-designed projects have to be student-driven, require a solid understanding and demonstration of concepts learned, and include reflection—all of the constructive elements of project-based learning.

Marta Donahue, executive director of the Cincinnati Montessori Secondary Teacher Education Program, says that by setting aside at least 90-minute blocks of time to do projects like these, Montessori classrooms “make space for learning that a 50-minute period is not going to accommodate.”

Seeing the Crossover

Although traditional schools may not be equipped to provide for extended learning time, they can leverage existing resources to create more student-centered classrooms.

To start, teachers can incorporate more multilayered projects that accommodate different learning styles and include various instructional and assessment tools such as self-evaluation, says Donahue. This shouldn't be difficult “if you're clear about what it is you're teaching and what objectives you have for a particular cycle of study.”

Keeping hands-on materials like protractors, rulers, or models readily available, rather than tucked away in bins or drawers, is another way that teachers can “be more Montessori,” explains Rawn. “You never know what a child is going to be driven by, and by having those materials out, you're allowing them to make a lot more of their own

choices on a daily basis.”

If teachers want students to have a direct learning experience with a material, Cossentino recommends trying the Visual Thinking Strategies (VST) curriculum, which uses discussions about works of art to improve students' critical-thinking and communication skills. Instead of the teacher telling students about a work of art, they present the piece and ask three questions: *What's going on in this picture?* *What did you see that makes you say that?* and *What more can we find?* VST shifts the teacher's role from lecturer to facilitator.

Although it's important to have hands-on materials on display, how they are organized can also influence student learning. Cossentino advises teachers to create more peaceful classrooms by “taking down the clutter.”

“Classrooms are too filled with stuff for kids to look at,” Cossentino says. “It's very difficult to calm down and concentrate on something if you're being visually bombarded.”

“When you think of hands-on, you think of a lot of activity and a laboratory situation, but actually a really clean, ordered, uncluttered learning space can be transformative,” explains Cossentino. By “imposing more of the structure in the environment itself,” teachers won't need to impose the structure externally by telling students what material to work with or how long they can spend on a specific activity.

Shifting choice into the hands of students and engaging those hands in meaningful learning is at the crux of Montessori education. But as Donahue suggests, it really comes down to the teacher being able to step back, anticipate student needs, and “really light the fire for kids in terms of getting them interested in a topic.”

Adds Cossentino, “If you want to be a student-centered teacher who helps students explore, experiment, and construct their own learning, the most important skill is to be able to listen to and observe your students. That's a real flip from ‘Listen to me; I'm going to tell you everything.’” **EU**

—SARAH MCKIBBEN



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