

How to think like a genius: The Montessori method

Try seeing the world through someone else's eyes

By Roberta Ness, for the Houston Chronicle

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Photo: Kurt Hutton, Kurt Hutton / Picture Post / Getty Images
Nov. 2, 1946: Maria Montessori visits a classroom in Acton, London.

Most of us think of radical scientific innovation as the whiz-bang invention or discovery that displaces what came before and reshapes the world as we know it. Transistors, assembly lines, and radiation, for example, were revolutions that wiped out whole industries and replaced them with new ones. Computers, cars, and X-rays/microwaves came to enrich modern life.

Maria Montessori, a genius scientist who founded Montessori schools, engaged in an entirely different kind of innovation. Yet earth-shattering it was. Montessori originated a transformation through the prism of an idea. Not only was her idea radical, her process for achieving insight was equally radical. And it was simple: It came from walking in someone else's shoes.

Montessori's personality was disruptive. She was born in 1870 to a progressive Italian family that supported education for women. But that wasn't enough for her. The

Montessori family believed that young Maria could become a teacher — the only suitable profession for a “modern” woman. But she wanted more.



Photo: Collection Of Donna Ewald Huggin
Glass Classroom, the Montessori school at the Pan Pacific International Exposition 1915 World's Fair in San Francisco. Maria Montessori stands in back in the big feathered hat.

Despite the objections of friends and family, she took classes at a boys' technical school for engineers. When she decided to become a physician — a scandalous aspiration — both her father and the head of the board of education at the University of Rome told her it would be impossible. But Montessori so excelled in the sciences that the university was forced to capitulate, and ultimately awarded her one of the first medical degrees ever achieved by an Italian woman.

Montessori's chosen specialty? Psychiatry: a field so filled with human monsters that it frightened the most stoic of men.

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In those days, insanity and retardation were treated the same — and both were treated terribly. Children and adults alike were locked in bleak facilities. One of Montessori's responsibilities was to travel to each of the asylums around Rome to choose suitable patients for the university clinic.

In the asylums, she noticed that the retarded children would reach out for things to grasp, even searching the ground for crumbs of food after they were fed just so as to have something to manipulate. They were craving stimulation, she thought. And she jumped to a daring deduction: Their developmental delays might be related to their environment.

Montessori asked herself: *If I were a child, how would I react if every time I tried to manipulate my environment, the means to do so were taken away from me? How would I respond to school where I hoped to learn by doing, only to find that I must sit still and listen or watch rather than trying things out for myself? How would it be if I were constantly controlled by those around me, like a little doll, allowed to do nothing on my own because I might act too slowly or incorrectly?*

Montessori tells the story of a baby girl, about six months old. Given a rattle, she dropped it again and again. She wasn't watching the rattle as she released it, but rather the capability of her own tiny hands. On closer scrutiny, Montessori noticed that the baby systematically varied the activity, dropping or not dropping the rattle as she

opened a single finger at a time. After the baby's mother grew frustrated at having to pick up the toy repeatedly and took it away, the baby cried. But this reaction was not simply a control-related tantrum: The baby was expressing frustration at not being able to complete her experiment.

Montessori's ideas grew larger at every stage:

- 1) There might be something about the environment that retarded child development.
- 2) Education could impact advancement among normal children.
- 3) Self-learning among children suggested an approach to instruction that was more child-centric.
- 4) Morality evoked an educational system grounded in the child's right to respect and dignity.

The physician turned into an educator. (If her family was relieved, it was not to last.) She read everything published over the former 200 years on educational theory; she visited London and Paris to see if anyone there was training mentally deficient children. There was precious little for her to go on.

Upon her return to Italy, she founded the country's first state "Orthophrenic" school. Retarded children from around Italy were brought for two-year stints to live and study under methods that Montessori had developed. The results were hard to believe. Most retarded students attained unimaginable developmental milestones; many passed the state examinations taken by normal children.

The Montessori Method is rooted in respect for children. At a time when children sat on hard benches listening silently all day to a single teacher's recitation and suffering the rod for any infraction of the rules, this was earth-shattering. No longer was the child dependent and subservient. Just the opposite: Montessori argued that children's natural impulses should not be suppressed; their natural hunger to learn should be nurtured and exercised.

Toys were replaced with child-sized tools, and children did tasks such as cleaning and cooking. Students taught themselves through self-exploration or were taught by older students. The teacher remained in the shadows, coming out only as needed as a non-directive guide.

Today there are an estimated 20,000 Montessori schools; they're on every continent except Antarctica. Montessori preschool students have been shown to out-perform traditional students on standardized tests of reading and math, and also possess advanced social skills. Older Montessori students have reported a greater sense of motivation and community than students from other schools. In a randomized comparison, Montessori pupils also wrote noticeably more creative essays.

Montessori's ideas are forever being rediscovered anew. [Khan Academy](#), founded in 2006, updates Montessori's concept of self-directed learning for the web generation. Khan Academy's streaming videos and exercises demonstrate many of the same benefits as Montessori schools: For instance, children considered slow often catch up to and even exceed their peers when allowed to pace themselves.

Walking in another's shoes isn't the sexiest technique for radical innovation, but Montessori teaches us that it is a tool that can be used to transform.

When was the last time you worked your brain to squarely place yourself in another person's situation? When did you last hear an opposing political point of view and think, "Hmmm — if I were in the place of that person, might I also hold that opinion?"

Try it. You might be surprised what happens.

Roberta Ness, M.D., M.P.H., is a member of the elite National Academy of Medicine and winner of the Snow award, one of the highest honors given to a public health professional. The "How to Think Like a Genius" series is loosely adapted from her book Genius Unmasked. She's on the board of TED. And here's her TEDxHouston talk, ["Can Innovation Be Taught?"](#)

[Bookmark Gray Matters.](#) *This reaction is not simply a control-related tantrum.*