

What do
P. Diddy,
Sergey Brin, *and*
Peter Drucker
have in common



When
it comes to
producing creative
business leaders, a
Montessori education
has proven to be a
potent predictor
of future
success.

By Glenn Rifkin
Photographs by Asia Kepka





The **unique** and **widely lauded education method**, created more than a century ago by an Italian physician and education visionary, is built around the concept of **self-directed learning**, **mixed-age classrooms**, **collaboration**, **creativity** and **social responsibility**.

Eliminating the rigid structures of conventional classrooms, a Montessori school encourages students to embrace their curiosity, think imaginatively and see the world as an array of possibilities. In other words, it is an innovation incubator at the most basic level. And not surprisingly, the method has spawned a long list of overachievers.

When TV journalist Barbara Walters interviewed Google founders Larry Page and Sergey Brin in 2004 and asked what drove their success, she received an unexpected response: “nursery school.”

Page and Brin are products of a Montessori education. “We both went to Montessori school,” said Page, “and I think (our success) was part of that training, not following rules and orders and being self-motivated, questioning what’s going on in the world, doing things a little bit different.”

Marissa Mayer, CEO of Yahoo and a former Google vice president, told *Wired* magazine in 2011, “You can’t understand Google unless you know that both Larry and Sergey were Montessori kids. In a Montessori school, you go paint be-

cause you have something to express or you just want to do it that afternoon, not because the teacher said so. This is baked in how Larry and Sergey approach problems. They’re always asking, ‘Why should it be like that?’ It’s the way their brains were programmed early on.”

Despite its century-old existence and thousands of Montessori schools around the world, the unique teaching method, hailed by its proponents as far more effective and rewarding than conventional public education, has received little attention outside its core support group. Its supporters call it “the best-kept secret in education.” But lately, the Montessori Method has sparked a growing wave of interest due to recent blogging on the remarkable list of Montessori alumni. Though the sampling is hardly scientific, the varied and eclectic mix of famous people who include Montessori in their educational background is too compelling to dismiss, especially in the world of business.

Besides Brin and Page, the list of entrepreneurs and innovators includes Jeff Bezos, founder and CEO of Amazon.com;



Steve Case, founder of AOL; management guru Peter Drucker; media mogul and rapper Sean “P. Diddy” Combs; the late Katharine Graham, former owner and publisher of the *Washington Post*; Jimmy Wales, founder of Wikipedia; and Will Wright, SimCity computer game designer. Alice Waters, renowned chef and owner of Chez Panisse in Berkeley, Calif., studied the Montessori Method and is a former Montessori teacher.

Beyond the business realm, the list extends to a raft of highly creative, talented and accomplished people, including famed chef Julia Child; Jacqueline Kennedy Onassis; cellist Yo-Yo Ma; George Clooney, award-winning actor, producer and activist; actor John Cusack; actress Dakota Fanning; country singer Taylor Swift and magician David Blaine. The Nobel laureate in literature, Gabriel Garcia Marquez, author of “One Hundred Years of Solitude,” credits his Montessori experience for a significant part of his success.

“I do not believe there is a method better than Montessori for making children sensitive to the beauties of the world and awakening their curiosity regarding the secrets of life,” Garcia Marquez has said.

In a 2011 blog on the *Wall Street Journal* website, author and

entrepreneur Peter Sims wrote, “The Montessori educational approach might be the surest route to joining the creative elite, which are so overrepresented by the school’s alumni that one might suspect a Montessori Mafia.”

Indeed, in a six-year study of 3,000 innovative executives, professors Jeff Dyer of Brigham Young University and Hal Gregersen of INSEAD in Europe discovered that a significant number of the respondents had gone to a Montessori school “where they learned to follow their curiosity.” The most creative respondents spoke about being raised in a supportive atmosphere where curiosity and inquisitiveness were strongly encouraged. In an interview with *Fortune*, Gregersen said, “If you look at 4-year-olds, they are constantly asking questions and wondering how things work. But by the time they are 6 1/2 years old, they stop asking questions because they quickly learn that teachers value the right answers more than provocative questions. High school students rarely show inquisitiveness. And by the time they’re grown up and are in corporate settings, they have already had the curiosity drummed out of them.”

For Padmasree Warrior, chief strategy officer and chief technology officer at Cisco Systems, her Montessori education in Vijayawada, a town in southern India, had a significant impact on her business success.

Warrior attended a Montessori school from kindergarten through high school and vividly remembers being left to figure out the answers to problems on her own, a sometimes daunting and time-consuming endeavor that Montessori encourages.

“That stayed with me,” Warrior said. “Not being afraid of problems; looking at every problem as an opportunity to solve it versus being stumped by it.”

Warrior credits Montessori for instilling self-confidence at an early age, a crucial foundation for her leadership skills. “Walking into ambiguous situations and being comfortable with that is hugely helpful with my job,” she said. “Most executives want everything laid out clearly with all the i’s dotted and t’s crossed. But the real world is not like that. In my job, setting the technology direction for a massive technology company, you only get so much information, and at some point you have to make decisions and be comfortable with that. That’s something I learned early on.”

Schools, Not Factories

In the ongoing debate about the future of education in the U.S., many rue the factory model that has been in place for the nation’s public schools for more than a century and became a model for school systems around the world. Steve Denning, an author and global leadership guru, is often asked about the best ideas for education.



“The biggest problem is that we’re applying a factory model made up of hierarchical bureaucracies and a focus on efficiency, scalability and grinding out graduated students,” Denning said. “This system is run for the convenience of parents and educators and has little to do with lifelong learning that is critical to the future of the economy. When I started writing about this, people told me that we don’t need to invent a new system, it is already there. Montessori has been doing this for more than a century.”

Denning pointed out that the most successful companies these days are following vastly different strategies than the hierarchical bureaucracies that focus on little besides maximizing shareholder value. Getting managers focused on efficiencies and savings ahead of adding value for customers is a philosophy that is rapidly showing its age and ineffectiveness. Denning suggested that a radical shift to a creative, innovative economy — as demonstrated by the likes of Apple, Google and Amazon.com — is required for 21st-century winners.

“You have the basic challenge of a fundamental shift from the old model to running organizations aimed at adding value for customers, and running those organizations in a very different way to accomplish that,” Denning said. “The problem is that to do that, you need people who are graduates of a Montessori program. You need people who are creative self-starters, who are comfortable doing that and want to live

and flourish in that kind of world. The Montessori method fits perfectly into America’s emerging economy.”

How It Works

As the young students arrive at the Cambridge Montessori School in Cambridge, Mass., Katelyn Ryan, their 29-year-old teacher, reaches out to welcome each one and shake their hand. A visitor quickly realizes that this classroom is different, physically and cognitively, from any public grade school he has seen.

Brandon, a quiet but precocious 5-year-old, heads directly for one of the open wooden shelves that ring the classroom and pulls out some crayons and a poster-like outline of the United States. Without prompting, he begins coloring in the states as he concentrates on staying within the lines. When Benjamin, a 4-year-old, arrives to join in, Brandon silently welcomes him by making room and eventually begins suggesting coloring tips to the younger child. Over the next hour, Brandon moves, unprompted, from one task to the next, quietly working with arithmetic materials, reading and other sensory tools that are a core feature of the Montessori Method. Brandon embodies the very concept of self-directed learning, which is at the heart of Montessori.

Ryan, who has taught at Cambridge Montessori for five years and is a product of a Montessori education herself,

“When the children had completed an absorbing bit of work, they appeared rested and deeply pleased. It almost seemed as if a road had opened up within their souls that led to all their latent powers, revealing a better part of themselves.” — Maria Montessori

Born in Ancona, Italy, in 1870, Maria Montessori displayed an early penchant for bucking conventional wisdom. In a conservative bastion like 19th-century Italy, Montessori refused to follow traditional women’s roles and instead pursued a science education and became Italy’s first female physician. She became an early advocate for women’s rights, child labor laws and humanistic advances throughout Europe.

Teaching at the University of Rome, Montessori encountered the children of Rome’s working class and destitute at the university’s free clinics. In her work there, she realized that talent was universal but opportunity was not. These children, she discovered, came into the world with the same intelligence and potential as the children of the upper classes. They just needed a learning environment that would foster that potential in a way that was generally not available to such children. In 1901, she was appointed director of a school for mentally challenged children in what had been an insane asylum.

As a scientist, Montessori based her program on observation and experimentation. She realized quickly that there were methods for teaching children who had been considered unteachable. The results startled her but reinforced the notion that children, regardless of their environment, were like sponges eager to absorb everything and learn.

From these early experiences, Montessori set to work on creating the teaching methods that would redefine the whole idea of education. In 1907, blocked by Italy’s Ministry of Education from trying her methods on “normal” children, Montessori set up her Casa dei Bambini (Children’s House) as a forerunner to today’s day-care centers. For these young children of working-class Italians, Montessori provided a warm, stable environment focused on learning academic subjects as well as practical life skills. The children, many of whom entered the classroom wild and disruptive, quickly embraced Montessori’s methods, literally begging to be taught more and more.

Her reputation spreading quickly, Montessori’s methods were studied by such leading lights as Jean Piaget, Erik Erikson, Bruno Bettelheim and Anna Freud. She brought her ideas to the United States in the early part of the 20th century and was embraced by the likes of Thomas Edison and Alexander Graham Bell. Edison founded a Montessori School, and Bell



and his wife founded the Montessori Education Association in 1913. But the educational establishment in the U.S., fiercely dedicated to the factory model for education, mounted a vocal campaign denouncing Montessori and essentially drove her out of the country. Though her methods flourished across Europe and other parts of the world, Montessori schools did not reappear in the U.S. until the 1960s, when a new generation of advocates spearheaded the effort.

Among the key tenets of the Montessori Method:

- Montessori teachers act as coaches and facilitators for the children.
- Teachers have a deep respect for the children, and the children are taught to share that respect among themselves.
- Children are taught to be kind and peaceful.
- Classrooms are diverse and include multiple age groups.
- Students are taught to help younger children.
- Montessori assumes that children are born with native intelligence and each learns in his or her own way and at an individual pace. Students progress as they master new skills, moving ahead when they are ready
- There are few texts, no homework, no tests and no grades.
- Rote memorization and drilling are eliminated in favor of helping children truly understand a subject.
- Children learn that failure is acceptable and mistakes are simply learning experiences.

The foundational precepts of leadership that emerge from creativity, curiosity and self-awareness are the potent offspring of a Montessori education. Ingrained at an early age, these characteristics are strong predictors of future success.



moves slowly around the classroom, which bears little resemblance to a conventional public schoolroom. Absent is the teacher's desk at the front of the room, the large blackboard and the neatly arrayed rows of student desks. Instead, Ryan kneels next to each child, quietly asking about what the child is working on, making suggestions and offering encouragement. In Montessori, teachers are facilitators not instructors, guiding the natural process of learning. There are tables and chairs, all child-sized, and an array of Montessori educational tools, most of which date back to the origins of the method created by Maria Montessori in the late 19th and early 20th centuries. Child-sized cooking utensils and a kitchen area are part of the design in order for the children to learn practical skills as well.

There is a sense of calm and quiet purpose in the room. When one younger boy, age 3, has trouble focusing on a proj-

ect, Ryan talks with him and reminds him of tasks he has yet to complete. Montessori is all about self-directed learning, about allowing the child's natural sense of curiosity and discovery to flourish. "The learning is all tactile, sensory learning," Ryan explains. "We don't try to have 20 students all focused on the same subject for 45 minutes and then switch to another subject. In that setting, you might have five who are focused while the rest are bored or disinterested. Here, each child is focused on their task."

"Dr. Montessori was brilliant, and she doesn't receive the credit she deserves when you think about educational reform," said Dr. Ingrid Tucker, head of the Cambridge Montessori School. "What are school systems today trying to do? The very things she has done for 100 years."

Tucker, who taught for years in private high schools, could



always recognize the children who had early Montessori training. “I was blown away,” she said. “These kids were so much further ahead in math and in their other skill sets. There was a level of sophistication, of maturity, of depth and greater understanding and personal inquiry that set them apart.”

Of course, the Montessori Method is not without its detractors. Montessori has no tests, no grades and no homework. Conventional educators say that there is no reliable way to measure the Montessori outcomes. Over the years, parents and conventional educators have also worried that Montessori is too structured an environment and that students are not allowed to play or “be children.” Because most of the more than 5,000 Montessori facilities in the U.S. are private schools with often pricey tuitions (the Cambridge Montessori School costs around \$23,000 per year), some critics say Montessori is only available to privileged children.

In fact, a large percentage of Montessori schools around the world are located in impoverished neighborhoods and cater to underprivileged children. Maria Montessori set up the very first Montessori preschool in 1907 in one of Rome’s most downtrodden neighborhoods, and this Casa dei Bambini became a model for future Montessori schools. In the U.S., more than 350 public and charter Montessori schools have achieved high levels of success.

One such school is part of the Milwaukee public school system. It serves a mainly urban minority community and has been in operation since 1997. A 2006 study by professors Angeline Lillard of the University of Virginia and Nicole Else-Quest of the University of Wisconsin revealed that even in a public Montessori school, subject to state laws on education and curriculum, the student achievement was notable.

“On several dimensions, children at a public inner city Montessori school had superior outcomes relative to a sample of Montessori applicants who, because of a random lottery, attended other schools,” the authors wrote. “By the end of kindergarten, the Montessori children performed better on standardized tests of reading and math, engaged in more positive interaction on the playground and showed more advanced social cognition and executive control. They also showed more concern for fairness and justice.”

Too Old to Unlearn?

Much of the discussion surrounding the Montessori Method is focused on educational philosophy. But what about its potential impact on business and leadership? Given the spate of successful alums in the corporate environment, are there lessons to be learned and adapted in training and development programs for prospective managers and executives?

Daniel Pink, a best-selling author who writes about the changing world of work, believes the use of Montessori methods in corporate training is “a great idea.” Initiating such training is something else, however. “It would require people to unlearn some bad habits they’ve acquired in other types of formal education,” Pink said. “But that’s a speed bump, not a brick wall. If Montessori-style internal training isn’t already happening, someone should start it. It’s an idea whose time has come.”

Clearly some of the key attributes of Montessori are essential elements for strong leadership:

- Self-directed learning
- Focus on creative problem solving and innovative thinking
- Students teaching other students
- Stoking and encouraging curiosity
- Comfort with ambiguous situations
- Self-mastery of concepts to instill self-confidence
- Embracing failure as a learning opportunity

While intriguing, the concept has yet to get much traction among corporate leaders. Given that Montessori’s core

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enrollment is between ages 3 and 12, it isn’t clear that hardened business-type adults are malleable enough to unlearn bad habits and embrace such new ways to see the world.

But people like Denning believe that Montessori-like thinking is no longer a luxury but a necessity for a new millennium economy.

“An education like Montessori is a crucial part of this fundamental phase change to a creative economy, which is well under way,” he said. “The old dinosaurs are dying faster and faster, and new ones like Google and Amazon are emerging faster and faster. Some look at the current economic scene and see a deep recession, but we’re actually in a phase change to a different kind of economy. It is why we shouldn’t hold our breath for the old dinosaurs to start growing fast again.”

Finding the kind of leaders who feel comfortable and thrive in this new environment is a challenge. Cisco’s Warrior believes that her career has enjoyed significant benefits from her Montessori background.

“Much of what we did in Montessori was as a group,” she said, “and I like being part of a team. You weren’t forced to be part of a group all the time, but things usually were done that way. I like to share my thinking, but I am also pretty decisive and opinionated. The result is that I’m comfortable doing things as an individual and comfortable being part of a team.”

Peter Sims is convinced that future generations of leaders will require the kind of educational experience that Montessori generates.

“I believe that the leaders of the future are the ones who will be able to think in an inductive, deductive, rational way and in a much more qualitative, discovery-oriented way,” Sims said. “It is especially important when they don’t know what problems they are even trying to solve. In that situation, you have to be comfortable with failure, comfortable with experimentation and not being perfect. Otherwise, you end up getting suffocated.

“If you feel comfortable doing both analysis and discovery when you are younger, you are at a distinct advantage in this world,” he said. “It is becoming, not just a distinct advantage, but there is going to be no other way to be raised if you want to be a professional.”

Rick Fredkin is a perfect example. A successful small business owner, Fredkin, 30, started Hardwick Technologies, a computer consulting firm in Watertown, Mass., five years ago. He attended Cambridge Montessori School from ages 3 to 5 and then entered public school. The transition from the nurturing, calm environment of Montessori to conventional public school was so wrenching that Fredkin failed every subject and eventually convinced his town outside Boston to allow him to drop out after ninth grade.

Who will lead us next?

Given the odds, our artists from the Cambridge Montessori School have a bright future. We look forward to seeing their names in lights as they grow up, find careers, and become, in turn, role models for the generations to come.



"I did some home schooling and enrolled in some college classes, but essentially, I started working professionally at age 12," Fredkin said. "I did programming for companies all over Boston." He grew increasingly independent, traveling to Tokyo alone at age 15 and interacting with business people of all ages. He credits the Montessori environment, with its mixed-age classrooms, for making him comfortable working with adults when he was still a teenager.

According to Fredkin, leaving school so young "was an act of desperation to do something productive." Fredkin isn't completely sure why he was so miserable in a conventional classroom: "I theoretically had the intelligence to learn," but he was rebellious and had grown up with a highly successful father, computer science legend Edward Fredkin, who traveled a lot and often pulled his son out of school to travel with him. Finding himself in a structured classroom environment, bored, daydreaming, watching the clock, was too constricting after the Montessori experience.

Though Fredkin is hesitant to place too much emphasis on experiences he had from ages 3 to 5, he is clear that his Montessori experience was "extremely nurturing and calming, which was very powerful even at such a young age." He sees himself today as a creative person who "thinks about things, finds solutions, gets it done." And this fall, Fredkin has enrolled his own 3-year-old son at the Cambridge Montessori School. "For my son, there was no other choice," he said. "It was just so clear to me."

Aidan McAuley, sales capability manager at Coca-Cola in St. Louis, has so much enthusiasm for the Montessori Method that he helped form an online advocacy group called Montessori Madmen. These are fathers of young children enrolled at Montessori schools who are pushing hard for the spread of the innovative educational technique.

"Montessori is about following your interests and developing skills where you don't just learn but you learn how to teach as well," McAuley said. "When a young child learns that, it stays with them throughout their life. They develop respect for others, and that is the kind of thing that impacts organizations like Coke or any large company.

"With so many functional groups, the idea of understanding different tasks and people in other groups is critical to any corporate success," he said. "We're a global economy now, and all of a sudden what is valued is creativity, the ability to collaborate, passion, engagement. This generation is growing up on the Internet, and they are not interested in a job that tells them what to do. They want to see what they are capable of."

What McAuley and other Montessori advocates see is something innate in all of us. "We all want to have a sense of purpose and be engaged in the work we do," McAuley said. "If we do that, we'll reduce turnover, our sales will increase, people will be happier at work. When we look at Montessori children, we have to find ways for our workers to engage with their work in the same way." 

