The Social Relevance of Montessori in the First Plane

by Sarah Werner Andrews

This article represents an amazing reversal of linguistic analysis. Usually Montessori language is translated into "state" terminology. In this case, Sarah Werner Andrews puts state quality assessment terms into Montessori language. For example, domains for school readiness include 1) physical wellbeing and motor development, 2)social and emotional development, 3)approach to learning, 4) language development, 5)cognition and general knowledge. Sarah's use of rich Montessori theory and descriptive language brings Montessori to the essential state keys for expected government proof of quality.

Part 1

Finding Common Ground with the Wider Early Childhood Community

I am delighted to be with you this morning to continue our exploration of the social relevance of Montessori education, particularly in the first plane of development. This subject, "finding common ground with the wider early childhood community," is of particular interest to me since it is practically our family business in Portland. My husband has been working in early intervention for twenty-five years, first as a speech pathologist in Head Start classrooms, and then working with birth to three doing home visits and family support, and now as an administrator for the county early childhood

---

Sarah Werner Andrews *is an AMI teacher trainer, international speaker, and Montessori consultant, and is currently part of the training faculty at Montessori Northwest, in Portland, OR. She holds a bachelor's degree in music performance, an M.Ed from Loyola University, and AMI primary and elementary diplomas. She has worked in Montessori education since 1987 and has several years of teaching experience at both the primary and elementary levels and experience in administration.*
This talk was presented at the NAMTA conference titled The Social Relevance of the Montessori First Plane: Engaging Families, Building Partnerships, and Finding Common Ground with the Wider Early Childhood Community *in Dallas, TX, January 15-18, 2015.*

special education programs. One of my brothers-in-law is a positive behavior support intervention specialist, the other brother is in early childhood special education, and my in-laws are a retired speech-language pathologist and a family therapist. All of our children go to, or have graduated from, Montessori schools.

When we get together, as we often do, we each bring our own sphere of knowledge, expertise, and opinions. We are all working for the betterment of children and families, but we often speak a different language with a different lexicon, and we sometimes find ourselves arguing because we simply haven't realized that we are actually saying the same things and working towards the same goals but perhaps from different angles. It's also possible I just enjoy arguing with my brothers-in-law!

With the growing awareness of the importance of early childhood education and a better public understanding of early learning, it is now more important than ever that Montessori teachers are able to find common ground and to speak the same language as the wider early childhood community, so that we can talk clearly about true Montessori social outcomes. In education, Montessori is the misunderstood minority. While we do need to preserve the language of our culture, if we want to be understood, we must be able to translate what we do and what we are about into the language of the larger education community.

How Are the Children?

"Kasserian Ingera" is part of a traditional greeting of the Masai people in Kenya. In Swahili, it means, "How are the children?" The traditional answer is "All the children are well." If all of the children are well, it means that the family, the community, the society, and the culture is also well. So how are we doing? Are *all* of the children well? Are they happy? Are they safe and well-fed? Are they secure and loved? Are they caring for one another and helping one another? Are they curious, alert, engaged, following their passions, eager to learn?

Our shared responsibility for young children is to cherish them, protect them, and help them realize their potential. Montessori schools share this responsibility with families, health and social

Courtesy of Tim Kahn

service providers, and the state and federal government. Although our language might be different, we work towards a common goal: that all of the children are well.

Education is a basic human right, and in the United States, it is the right of every child. Our government believes, "Academic achievement is a cornerstone of independence, productivity, and active citizenship" (National Conference of State Legislatures). The 2014 update to the report from the National Conference of State Legislatures indicates "Children who [begin school] ready to meet its academic, social and emotional demands are more likely to achieve later academic and life success. Likewise, children who enter school behind their peers in these areas tend to remain academically behind and at risk for harmful behavior in adulthood (e.g., dropping out of school, criminal behavior, unemployment). Evidence suggests that more than half the achievement gap found in later school years already is present at kindergarten entry."

The "Preschool to Prison Pipeline"

In their book, *Inequality at the Starting Gate*, authors David Burkam and Valerie Lee detail the "social background differences in achievement as children begin school." While education is supposed to ameliorate differences and give all children equal opportunities to excel, disadvantaged children *begin* school with significantly lower cognitive, social, and emotional skills. These differences magnify

over time, widening the achievement gap for children of color and low socio-economic status.

Further complicating the issue, the most recent study, the Civil Rights Data Collection for the 2011-12 school year (Samuels), shows that over 8,000 children were suspended at least once from preschool. In a related study of over 4000 state funded preschools, over half of the suspended children were African-American, more boys were suspended than girls, and most of them were four-year-olds (Samuels). We all know four-year-old boys are challenging, but, "If you have a preschool program and you expel the children who need it the most, you're sabotaging your rate of return. No child is more in need of a school-readiness-boosting preschool experience than a child who is being expelled or suspended from a preschool" (Samuels). Children who are kicked out of preschool begin a career of failure.

> The thrill of independent movement balanced by the ***inhibition*** of movement provides a constant, positive tension that helps the child develop self-discipline and will. Self-discipline is essential for true freedom, for freedom is not license to do whatever one pleases; freedom is the ability to choose a reasoned path.

What Is "School Readiness"?

What do we mean by "school readiness"? What are the skills and abilities that very young children need in order to be successful? What should all preschools be working on to help children enter school ready to learn? The National School Readiness Indicators Report identifies five domains that will determine a child's readiness to succeed in school:

1. Physical well-being and motor development
2. Social and emotional development
3. Approach to learning
4. Language development
5. Cognition and general knowledge

First we'll see how the National School Readiness Indicators Report defines each one of these domains and its "core indicator," which is the measure used to assess the outcome. Then, we will take a look at how Montessori education supports these domains.

Physical Well-Being and Motor Development

This domain covers such factors as health status, growth and disabilities; and physical abilities such as gross and fine motor skills; and conditions before, at, and after birth. This is important because healthy children are more able to engage in the full range of life experiences that promote early learning, and because motor skills and coordination are connected to cognitive and social-emotional development, as well as to academic achievement.

The core indicator is the percentage of children with age-appropriate fine motor skills.

Social and Emotional Development

This domain combines two interrelated components affecting children's behavioral health and learning. *Social development* refers to children's ability to interact with others and their capacity for self-regulation. *Emotional development* includes children's perceptions of themselves, their abilities to understand the feelings of other people, and their ability to interpret and express their own feelings. School experience is more positive and productive when children have a sense of personal well-being established through stable, caring relationships in early years. Emotional health and social competence enable children to participate in learning and form good relationships with teachers and peers.

The core indicator is the percentage of children who often or very often exhibit positive social behaviors when interacting with their peers.

Approaches to Learning

This domain refers to children's inclination to use skills and knowledge. Key components include enthusiasm, curiosity, and persistence on tasks. This is important because habits and attitudes

towards school and learning affect experience; and creativity, independence, and cooperation enhance early learning.

The core indicator is the percentage of kindergarten students with moderate to serious difficulty following directions.

Language Development

This domain includes communication and emergent literacy. Communication includes listening, speaking, and vocabulary. Emergent literacy includes print awareness, story sense, early writing, and the connection of letters to sounds. Language proficiency is a key predictor of school success as it impacts reading abilities, cognitive skills and knowledge, and the ability to interact effectively with peers and adults.

The core indicator is the percentage of children almost always recognizing the relationships between letters and sounds at kindergarten entry.

Cognition and General Knowledge

This domain refers to thinking and problem-solving as well as knowledge about particular objects and the way the world works. Mathematical knowledge, abstract thought, and imagination are included. This affects how children learn to observe, note similarities and differences, and how they solve problems and ask questions. It is important because new information is categorized in context with existing experiences.

The core indicator is the percentage of children recognizing basic shapes at kindergarten entry.

I hope you are as excited as I am when you think about these five domains of school readiness. Nothing is more socially relevant than education, and an initiative led by state and national leaders identified five areas that are universally significant when considering how to support children in developing their educational potential. These five areas will help all children, regardless of their race, gender, ethnicity, or socio-economic status, develop the skills and

abilities they need to maximize their potential and live a healthy and happy life.

Best of all, these five domains are not all about academics: We are not solely talking about testing children for counting from 1 to 20 or recognizing letter names. The five domains of school readiness are concerned with the health and well-being of the *whole* child: the physical, emotional, social, and cognitive parts. In Montessori education, we call this *character*, the whole of what makes up a human being, from the Greek *kharakter* meaning *engraved mark* or *imprint on the soul.*

Montessori called the years from 3 to 6 the "embryonic period for character and society" (*The Absorbent Mind* 243) the time when the child's character and sense of society would be developed, much as the physical organs developed in utero and the brain developed in the first years after birth. This was the opportune time to *imprint on the child's soul* life-affirming, pro-social qualities of character. She also identified this same period as the time of a psychological "second chance" (195). This is the time to correct any physical, social or emotional difficulties that may have developed earlier in life, to remove obstacles, to blow up the "preschool to prison pipeline."

That she refers to this as a "second chance" also tells us that Montessori did not expel or suspend four-year-old boys. She knew that this was the time to protect and heal children with disadvantages, to remove *obstacles to development*, not the *children* themselves. I bet Montessori did not tell families that their child just wasn't a "good fit" for her program. Instead she wrote, "The disorderly became orderly, the passive became active, and the troublesome disturbing child became a help in the classroom. This result made us understand their former defects had been acquired and were not innate" (*The Absorbent Mind* 199).

How did this transformation happen? How did she get there? How do *we* get there? Why does the Montessori approach work? Let's examine the Five Domains of School Readiness through the lens of Montessori education.

Physical Well-Being and Motor Development

This first domain, physical well-being and motor development, is the foundation for everything that follows. This is because "healthy children are more able to engage in the full range of life experiences that promote early learning, and because motor skills and coordination are connected to cognitive and social-emotional development, as well as to academic achievement" (National School Readiness Indicators Report). In a Montessori environment, the practical life area is the foundation for everything that follows. Practical life is the cornerstone of self-construction. Practical life is where we first meet the child in supporting her physical, motor, cognitive, and social-emotional development.

Montessori writes, "The child has a body that grows and a mind that develops…He does not grow because he is fed or because he breathes. He grows because his potentialities for life are actualized… because his life is developing according to its natural destiny" (*The Discovery of the Child* 61). How does the child begin to actualize his potential? It is through purposeful movement. The basis of practical life is the coordination and refinement of purposeful movement. The optimal word is "purposeful."

Courtesy of Jamie Rue

Montessori writes, "Movement has great importance in mental development itself, provided that the action which occurs is connected with the mental activity going on… Watching a child makes it obvious that the development of his mind comes about through his movements" (*The Absorbent Mind* 142). So while movement is important, it is the *function* of that movement, or the *object* of that movement, that captivates the child's interest and holds it so that self-actualization can occur. The materials provide the function and object for the movement. The materials are the vehicle that drives self-construction.

If the material is not attractive and intriguing, the children won't choose it. If part of the material is broken or doesn't work perfectly, the children will not continue to use it. If the materials are too challenging, or not challenging enough, the children won't choose them. The materials must call to the child and say, " 'Come, beautiful little hands. Dive into the water and take the soap!' From everywhere the bright objects call to the child; they almost begin to form part of his disposition, of his being, of his very nature, and there is no longer a need for the teacher to say, 'Charles, clean the room' or 'John, wash your hands' " (Montessori, "The Child" 11).

But here's the key, and this is what makes practical life so essential for character formation: It is the *movement* that is interesting to the child, not the *stopping*. The child is interested in *pouring* the water: the sound of the watering trickling, the sight of the glass filling, the balance of muscles needed to tip the pitcher just enough, so much so that often the child keeps pouring long after the glass is filled and the water is streaming over the top! It is the *pouring* that so captures the child, but it is the development of the *will* that enables the child to *stop* pouring. The thrill of independent movement balanced by the *inhibition* of movement provides a constant, positive tension that helps the child develop self-discipline and will.

Self-discipline is essential for true freedom, for freedom is not license to do whatever one pleases; freedom is the ability to choose a reasoned path. The children have the liberty and self-discipline to coordinate the movements necessary to pour without spilling, to walk around a rug without disturbing it, to button one's own

sweater, or to welcome a guest to the community, and this gives the child true independence.

Social and Emotional Development

I'm sure you are detecting the overlap into the second domain, social and emotional development, because these are the other purposes embedded into practical life. First, there are the activities of grace and courtesy, which give the children the means to practice positive social interactions with others, and these social role-plays are essential to a well-functioning Montessori community. Remember, the child asks us to "Help me do it by myself." Knowing how to handle any kind of social situation that arises, from offering help to a little one in cleaning up a spill properly, to asking a friend to play, to covering her mouth when she sneezes, fills the child with confidence, dignity, and a quiet sense of competence that will remain with her forever.

We also see that the children have two distinct stages in how they engage with the activities of practical life. Montessori referred to these as the two "psychological stages" of the child's work. In the first stage, the child works for himself, for his own self-construction. He is guided by his sensitive periods for order and refining movement. This work is largely unconscious; the child does not know *why* he chooses a particular activity, he is just drawn to do so. The satisfaction he feels upon gaining independence and freedom to do things independently becomes a motivation unto itself.

But as he becomes more skilled and his will becomes more directed, the task itself no longer has the challenge necessary to engage his concentration, and he begins to turn outward in his work. This is the second stage of the work. We see him choose an activity more consciously; he *decides* to act. He may decide to scrub his boots because they are caked with mud. He may notice that a table has dried polish on it and therefore needs to be washed so that it is clean and ready for someone's work. He may see that the classroom laundry is done and needs to be folded and put away. He may decide it would be fun to cut banana slices so that everyone in his class could have an extra treat at the snack table. The child has the ability and the desire, or will, to respond to the

needs of the environment. His activity is directed outward. This builds social cohesion in the community and forms the beginnings of social responsibility.

Within each of the activities of practical life, as the child works with mind and body in harmony, she begins to integrate her personality. In the book *Creative Development in the Child* we read, "When the child is given the means with which to act, and the freedom to act, he reveals the highest qualities that his soul possesses" (61). When Montessori talks about the "highest qualities of the child's soul," she is talking about the true nature of children, of children following a healthy, happy, normal path of development. She called this *normalization* and in the wider early childhood community, we call it *self-regulation.* Whether normalization or self-regulation, what we see in the children is the same: the ability to concentrate, the love of work, self-discipline, and a heightened sense of sociability, which includes spontaneous expressions of kindness and affection for others.

Approaches to Learning

This brings us to the third domain that is important for success in school: the child's approach to learning. As we said earlier, this domain refers to children's *inclination* to use skills and knowledge. Do the children want to learn? Are they engaged? Key components in this domain include enthusiasm, curiosity, and task persistence. This domain is important because habits and attitudes towards school and learning affect experience, creativity, independence, and cooperation.

This can be more simply put by asking if the children are happy. Do we see the joyful engagement that should be characteristic of a Montessori community? Happiness has both mental and physical components. It is a mental state of well-being and contentment and a physical state involving neuro-chemicals such as endorphins, oxytocin, serotonin, and dopamine. Endorphins provide that rush of good feeling that happens when we laugh heartily or exercise; oxytocin is associated with feelings of trust and connection; feeling good overall boosts levels of serotonin; and when we are happy, dopamine floods into our system and opens up the learning chan-

nels in the brain. All of these "happiness neurochemicals" decrease the stress hormone cortisol thus protecting our bodies and minds from the damage caused by stress.

Shawn Achor, in my current favorite TED Talk "The Happiness Advantage," says, "The lens through which we view the world shapes our reality. If we change the lens, we change the reality." That lens is inside of us, and it is our internal world that shapes our happiness, not our external surroundings. Our success comes from our level of optimism, our social support, and our ability to see stress as a challenge, not as a threat. Our brains, in a positive state, perform significantly better than at negative, neutral, or stressed. When we are happy, our intelligence, creativity, and energy levels all improve. What's more, by practicing happiness, we can rewire our brains, allowing us to adapt to the world in a different way.

One path to happiness comes when we are in a state of *flow* and we are deeply engaged in an activity. Cofounder of the NeuroLeadership Institute Dr. David Rock describes deep engagement: "Engagement is a state of being willing to do difficult things, to take risks, to think deeply about issues and develop new solutions.... Interest, happiness, joy, and desire are approach emotions. This state is one of increased dopamine levels, important for interest and learning" (Alber).

Let's break this down. The "willingness to do difficult things" speaks to self-discipline and task persistence. The willingness "to take risks" is directly related to our Montessori principle of "friendliness with error." Both of these characteristics are supported in a Montessori community where children live in the security of knowing that it feels really good to complete a difficult task that they chose themselves, and that if they make a mistake, it's OK, they can fix it. And if they can't fix it themselves, another child or adult will be there to help them. When we encourage creativity and exploration we are supporting the children's ability "to think deeply and develop new solutions." Approaching learning with interest, happiness, and growing confidence speaks both to independence and to its partner interdependence.

Language Development

Dr. Adele Diamond, the executive function goddess, and one of my personal heroes, is adamant that young children don't need literacy experience, they need language experience. Language experience includes listening, speaking, and vocabulary. Everything that develops in reading and writing is built on the foundation of spoken language. It is well documented that the young child's language proficiency is a key predictor of later school success as it impacts reading abilities, cognitive skills, and knowledge. In her excellent article, "Why Phonics Teaching Must Change," Jeannine Herron writes, "For most children, their first experiences with letters and words dictate how the brain establishes neural networks that may become habitual pathways as reading skills develop" (78).

When we recite poetry, or silly rhythms, or play the question game, or even have a simple conversation with a young child, we are building the repertoire of spoken language experiences that child can draw from in writing and reading. We simply cannot do too much spoken language. Even simple activities like going for a little walk around the classroom and naming the parts of the room: exterior door, ceiling, window frame. Or as Polli Solholt charmingly reminded us at a recent NAMTA conference, "talking about the child's clothes." "Let's see. Today you are wearing a hooded sweat-shirt, blue jeans, crew socks, and a canvas belt," these simple conversations are extremely valuable for young children. Every time we talk with a child, we are doing the best thing possible for him at the moment. What's more, singing a song, reciting a poem, or doing finger plays also builds phonological awareness: the awareness that words are made of sounds.

Through engaging in spoken language activities with the children, we are building our relationship together, and sharing a social connection that is a deeply human quality. As Mario Montessori cautioned the students in the 1946 London Lectures, before we go into a classroom and attempt to "teach" them language, we ourselves must first feel the deeply human connection that comes through sharing language. "For every word is a monument to some soul that has gained strength through agony or happiness, who has broken the silence, created a word which will pass from generation

to generation as long as the soul and intelligence lasts" (65). This is the spirit in which we introduce the sound game, sandpaper letters, and the silent communication of writing and reading.

Our joyful purpose with all of our language activities is to help every child feel she is capable of meaningful and effective communication, worthy of respectful interpersonal communication, and able to identify with the expressed thoughts, feelings, and experiences of others. Through language development, the child builds self-confidence, self-worth, and empathy.

Cognition and General Knowledge

And finally, we come to the last domain, cognition and general knowledge. This domain refers to thinking and problem-solving as well as knowledge about particular objects and the way the world works. Mathematical knowledge, abstract thought, and imagination are included. This affects how children learn to observe, note similarities and differences, solve problems, and ask questions. It is important because new information is categorized in context with existing experiences.

It is through our senses that we take in information and build our knowledge of the world and how it works. It is how we make sense of the world. Montessori writes, "What we call education of the senses is in reality an aid to the construction of the intelligence" (*Creative Development in the Child* 105). Let's think about this. We understand the idea of "pain threshold," the point at which a sensation increases to the point of becoming painful; but consider the opposite effect, what is the *minimum* amount of stimulation we need in order to be conscious of a sensation? Imagine a heightened consciousness that allows for the perception of increasingly subtle, delicate sensations: that shade of green is just a bit lighter, that violin is just perfectly in tune, the surgeon's blade needs just this amount of pressure, this dish needs just a bit more cardamom. In order to be perceived, a sensation must cross the threshold of consciousness, so if our awareness becomes more refined, the threshold of consciousness also expands. In this manner, as the child's sensory perceptions become more and more refined, her consciousness expands and her intelligence grows.

The structure of activity in sensorial also supports cognition and general development. Through matching, children observe exact sameness, and through grading, children explore the relationships between and among various objects as they build an understanding that nothing is absolute and everything depends on the context: This tile may feel rough, but it is smoother than this one. Through the sensorial activity of grading, the children explore the details through their relationship with one another. As her perceptions become more refined, the quality of information she is able to take in also becomes more refined, and she is increasingly able to make more reasoned judgments and comparisons.

While Montessori was interned in India before World War II, she reminded the students in the 1939 training course, "If we go on with this education, which gives the child gradual independence, his personality will acquire the capacity for clear judgment. In society, this is most important. When we are able to judge for ourselves independently, we cannot fall victim to the enthusiastic words or fanatical reasoning of another person" (*Creative Development in the Child* 201).

Montessori also recognized the importance of the child's work with the sensorial materials and the development of imagination. "The child's mind between three and six can not only see by intelligence the relations between things, but it has the higher power still of mentally imagining those things that are not directly visible" (*The Absorbent Mind* 176). To Montessori, the building of abstraction and imagination went hand in hand; each played a mutual part in constructing the mind. Abstractions come from cultivating the ability to extract the essential, limited qualities of an object, and then the imagination reassembles and rearranges those abstractions in an unlimited fashion. Order and exactness in mental images are the necessary structures that hold abstraction and imagination together.

"Imagination is the essence of the human mind which builds and constructs. Imagination does not develop from what the child hears, but from his own efforts in the natural world" (Unpublished London Lecture 97). Montessori observed that imagination is not something taught, but that the child constructs his imagination through his own efforts and experience. Alison Gopnik, scientist and author of *The*

Philosophical Baby, echoes this understanding when she summarizes, "Understanding the causal structure of the world and generating counterfactuals go hand in hand. In fact, knowledge is actually what gives imagination its power, what makes creativity possible" (46).

It's pretty funny that in this domain of cognition and general knowledge, when we are talking about the construction of intelligence, imagination, clear judgment, and independence of thought, that the "core indicator" is the number of basic shapes a child can identify! However, perhaps this is not so funny when we consider the geometry cabinet and all of the riches contained therein, but that's a story for another day….

Conclusion

When we consider what it really means to educate a child we are talking about cultivating life carefully, thoughtfully, intentionally cultivating each precious life–the whole of a child's life. As Adele Diamond reminds us in her paper "The Evidence Base for Improving School Outcomes," "A human being is not just an intellect or just a body; every one of us is both–and we are not just cognitive and physical, but also emotional and social. We ignore any of those dimensions at our peril in raising and educating children… It all comes back to the importance of action for learning and the fundamental interrelatedness of the different parts of the human being, and of all human beings to one another. The best and most efficient way to foster any one of those parts, is to foster ALL of them" (781).

And indeed, when Montessori describes the outcomes of normalized development, the infinity of negative behaviors disappear and a universal child emerges. Even though every child is unique, they all share the characteristics of self-discipline and social-discipline:

- controlled and purposeful interactions with others,
- mutual spontaneous respect,
- a willingness to help others,
- spontaneous responsiveness to the needs of others,
- benevolence, sympathy, and altruism towards others,
- and a non-competitive attitude.

These characteristics of self-discipline and social-discipline can be applied to any setting and environment and form the new paradigm for how the child, and the adult he becomes, interacts with the world.

Montessori paints a beautiful picture of the child who appears with normalization. "All the while, he is a real child, fresh, sincere, gay, lively, shouting when his enthusiasm overflows, applauding greeting loudly, thanking with effusion, calling and running after one in sign of gratitude. He approaches all, admires everything, adapts himself to everything" (*The Secret of Childhood* 146). This is no little clone, or "perfect child" but a child who embraces life with love and enthusiasm.

Although normalization is the most important single result of our whole work, Montessori was clear that its importance is not so much a point of *arrival,* but a point of *departure.* For now the child is truly free to develop his mind and his personality as nature intends. There are no more obstacles barring his path. The qualities of spontaneous discipline, continuous and happy work, respect, and empathy towards others becomes his de facto personality. He approaches learning and discovery with enthusiasm and confidence. His character is continually strengthened by new challenges, and his intellect is insatiable (*The Absorbent Mind* 206-207).

Courtesy of Jamie Rue

Part 2

It's Not About the Fish

In part two, Sarah Werner Andrews takes on another linguistic theme: the measure of progress and how language reflects historic change. School readiness is not a worthy educational goal; education for life is a twenty-first-century approach acknowledging that education has progressed well beyond the idea of being prepared for a collection of facts. Modern, action-based education is rooted in Montessori's century-old concept of the human tendencies that cross socio-economic barriers. When education follows these tendencies, it can forge a path to a normalizing balance that strengthens children's lives and character.

After this thorough exploration of how Montessori education supports "kindergarten readiness" through the Five Domains of the National School Readiness Indicators Report, we should probably address the elephant in the room: Montessori educators are not interested in preparing children for kindergarten. We don't even want children to go to kindergarten! That's not why we do this work. We have our own agenda, and we don't really talk about it in the wider early childhood community. My elder son calls it my Montessori Plan for World Domination. I confess, that's true, I do call it that, but we can hardly write *world domination* into a charter!

To further complicate the matter, Montessori herself never even considered her work an "educational curriculum." Even the title of her book *The Montessori Method* was not her idea. Montessori wrote of the "discovery" of the child, and the "secret" of childhood, and even Margaret Stephenson, who devoted her life and work to Montessori said, "In reality, there is no Montessori Method, there are not Montessori Principles–what we are speaking of are universal principles guiding the development of man from conception to maturity" (7).

If we are not preparing children for kindergarten, and we don't have a "Montessori Method," what are we doing? We are here because of those "universal principles." What Montessori discovered was a new kind of child: the child that appeared universally, regardless of socio-economic status, regardless of race, ethnicity, or gender. This universal child appeared when obstacles to development were re-

moved, defense mechanisms fell away, and the child returned to the happy, healthy path of development that is every child's birthright. She called this process *normalization*, again, not a word we can use in public, but it was this result that captured the world's attention in 1907 and continues to do so today.

Montessori called her approach an *aid to life*. Normalization opened up a doorway to a new kind of life and became a point of departure. But departing for where? What kind of life are we preparing our children for? It will be twenty years before these children are adults. How do we prepare children for a life we can't imagine? Well, one way to look into the future is by looking into the past. My husband and I sometimes play a game together called "Five Years Ago Did You Ever Think." We'd think about where we were and what we were doing five years ago, and be amazed at where life had taken us. What if we played the game "Twenty years ago did you ever think"?

> The future these children will live in can't be taught or trained today. So instead of thinking about "school readiness," or a "readiness to learn and be tested on a collection of facts that will soon become irrelevant," let's think instead about education as an aid to life.

Let's look back twenty years and think about the way information and culture have changed. Twenty years ago, the Beastie Boys' music video "Sabotage" played constantly on MTV. Donkey Kong was the winner of the "Players Choice Award" from Nintendo. The TV show "Friends" debuted, launching legions of Rachel haircuts. Most people didn't have mobile phones, but you might have had a car phone, and teenagers carried pagers!

This is amusing, but why is it important? Let's have a little fun with the parts of speech and think about what this means. The nouns "music," "games," and "communication" are very stable; they've been around as long as human have existed, but they are also a little boring. It is the adjectives that make them interesting and funny. Which music video? The Beastie Boys video! What kind of game? Donkey Kong! What kind of phone? "A CAR phone!" But adjectives (or nouns that function as adjectives) also make those nouns

superficial and temporary; with time, they fade into obscurity. It is action that's exciting! Progress is action. Change is action. Even the passage of time is action. But what gives action its passion is the adverb. It is *how* we do the action, *why* we do the action, and the context of *where* we do that action that sustains our interest and keeps us engaged.

If we consider games for example, the game of running and chasing has existed as long as human beings have walked upright. But *how* and *where* we play run and chase has changed dramatically. Even though children still run and chase in the traditional way, not so long ago, people began to run and chase in a video game called "Pong." Pong was the very first video game I played, and it featured a solid black screen with a white line down the middle, and two short white lines that could "run" and "chase" a white blip in order to "hit" it across the white line. Today, my sixteen-year-old son plays a run and chase video game that is virtually indistinguishable from a televised live soccer match. We have no idea how running and chasing is going to look in the future, but what we do know is that tomorrow's changes will continue to morph and magnify into something as inconceivable to us today as the FIFA 14 World Cup Soccer video game would have been to the creators of Pong.

In order to be socially relevant, how we think of education has to undergo a shift of equal magnitude. For generations, the prevailing platitude has been, "It is better to teach a man to fish, than to give him a fish." Verbs instead of nouns, right? Isn't that what we want? The platitude rationalizes, "If we give him a fish, he has been fed for a day, but if we teach him to fish, he can feed himself for a lifetime." But this is a shallow truth. This adage only works if we assume that there will always be enough fish and the technique for fishing will never change. Neither of those assumptions is relevant in the twenty-first century–in every way imaginable, we are redefining both the fish and the fishing (Brown & Thomas).

In education, we have to stop focusing on the curriculum, or *what* it is we are teaching (the *facts* or the *nouns)* and stop thinking that learning the facts constitutes education. It is not about the "fish." The future these children will live in can't be taught or

trained today. So instead of thinking about "school readiness," or a "readiness to learn and be tested on a collection of facts that will soon become irrelevant," let's think instead about education as an aid to life. Life is dynamic, fluid, and constantly changing. Let's move from the nouns and adjectives to the verbs and adverbs. Let's shift our expectations from school readiness to cultivating learning: passionate, engaged, creative, action-based learning.

In the book *World Class Learners* by Dr. Yong Zhao, from the University of Oregon, the author writes that the future will be determined by entrepreneurship. He describes entrepreneurship as "an individual's ability to turn ideas into action and is therefore a key competency for all, helping young people to be more creative and self-confident in whatever they undertake" (8). From his perspective, the education system cannot keep pushing students into the same kinds of career pathways that their parents took. Instead, we should be helping students map out new pathways that relate to the changing realities of their world (7).

Entrepreneurship, at its heart, is about the desire to solve problems creatively. Traits like creativity, curiosity, imagination, risk-taking, and collaboration form the foundation of entrepreneurship. Yong Zhao and many other contemporary education reformists believe that entrepreneurship is in our bones and is a part of our humanity. He writes, "Human beings are born with the desire and potential to create and innovate, to dream and imagine, and to challenge and improve the status quo. We are also born with the propensity to be social, to communicate, and to collaborate" (8).

This kind of innovative, cutting edge thinking about action in education sounds a lot like our hundred year old theory of the human tendencies. Could it be that Maria Montessori was a radical innovator? Our classrooms and school communities along with our environments for learning are designed to support the action of the human tendencies. We too recognize that humans are born with broad potentialities to create, to work, to imagine, to communicate and collaborate with others, and that our life force drives us ever towards growth, greater exactness, and precision. These are the "universal principles" that Margaret Stephenson wrote about and that became her central focus.

Because the human tendencies are innate and universal, they level the playing field. The disadvantaged child and the child of privilege are born with the same human potential, so by organizing our educational programs around supporting the human tendencies, we circumvent the whole notion of the "haves" and "have-nots." Education that supports the human tendencies becomes the great equalizer that all education and social reformists are seeking. Supporting the human tendencies becomes the path to normalization, the doorway to the new kind of life. This doorway can open for everyone.

We also recognize that our human potential can be suppressed or amplified depending on the kinds of experiences we encounter. Our schools and environments can support and strengthen children's desire to ask questions, experiment, and discover, or it can lead them to complacency, misbehavior, boredom, and even despair. A couple of years ago, in preparing for one of his lectures, Dr. Steve Hughes searched the phrase, "school makes me" and the auto-complete offered the choices "school makes me want to cry," "school makes me nervous," and "school makes me sick." It still comes up that way–I just checked it myself. Why do we tolerate this?

Just because we work in Montessori schools doesn't mean that we automatically move to the front of the pack in the "Race to the Top" either. Montessori schools can be just as soul crushing as any other educational program if we lose sight of what our adult responsibility should be. We can deliver Montessori lessons in a lock step, check-sheet curriculum, instead of through our observations of the child's interest and readiness. We can eliminate the children's liberty and free choice by assigning stamp game problems, requiring children to write down all of their moveable alphabet work, and saying things like, "Before you do any art, you have to do one math and one language work." If we are not thoughtful and careful, we can thwart children's social and emotional development under the guise of "protecting concentration" by restricting their interactions with one another and the constant refrain of "Please walk away."

It all comes back to the grammar again, the nouns and adverbs. It's not about the "what." Anyone can have something called a "Montessori school." It is about "why." Why are we giving this individual child this particular lesson? It is about the "where."

Where does this child and her work fit into the larger picture? But most importantly, it is about the "how." How do we cultivate this child's development and human potential? How do we support the action of the human tendencies?

So how *do* we cultivate human potential? If I had to choose one human tendency that captures the spirit of what Montessori envisioned decades ago, and what contemporary education reformists are advocating for today, that human tendency would be *exploration.* Exploration is the lynchpin that holds together all of the other human tendencies and our work of supporting human development. Without exploration, the other human tendencies cease to drive us forward. Without exploration, the human tendencies become "Kindergarten Readiness" instead of "World Domination." It is exploration that keeps us true to our mission.

Exploration forms a dynamic trinity with order and orientation. Order provides the security and stability for safe exploration, and the means for orientation. But with orientation comes the desire for continued exploration; exploration shakes up the order and requires reorientation. The constructive tension that exists between order, orientation, and exploration vibrates with energy.

Exploration gives work and activity their purpose and meaning. Curiosity and interest fuel exploration and this elevates activity from mere occupation to "flow"–inspiring concentration, satisfaction, and fulfillment. What would exploration be without communication? We all want to share our discoveries with other people. Isn't this one of the ways that we learn, from other people? What if no one ever communicated their discoveries?

Through the human tendency for repetition, exploration leads to increasing exactness and precision and strengthens our abstractions. Exploring those abstractions liberates our imagination. It is our imagination that makes us human, both preserving and perfecting our human spirit. Without the dynamic energy of exploration, our human tendencies become static and lifeless.

Just imagine all of this energy in the classroom! For teachers, this could be terrifying! When the children explore, they are moving into

unfamiliar territory for themselves and for us. We are relinquishing our control, and with it, the certainty that they learned what we intended. Exploration shakes up the security of what is known and familiar, and forces us to question what we thought we knew. It messes with our ego and our pride.

Montessori anticipated this when she wrote in *The Advanced Montessori Method*, "The highest form of humility in men of science is their ready self-abnegation, not only in externals, but even in spiritual things, such as a cherished ideal, convictions that have germinated in their minds. Confronted with truth, the man of science has no pre-conceptions; he is ready to renounce all those cherished ideas of his own that may diverge there from" (105). As Montessori adults, people of science, the "prepared environment" is our laboratory, and when we support exploration, we have to be willing to set aside our preconceived expectations of how the children will work, behave, and interact, and instead work harder ourselves to understand what they are showing us.

Exploration also involves collaboration and companionship. It is a social endeavor. If a child is in our class from 8:30 to 3:30, six hours a day, five days a week, that's 1,800 minutes each week. How many lessons do you give a child each week? Let's be generous and say five, although I don't think I ever gave a child a new lesson every day. Let us say each lesson is fifteen minutes more or less? That means that the time a child spends in lessons with you is only about 75 minutes out of the 1,800 minutes she is at school each week. That's 4% of her time, of her week, spent receiving "direct instruction" from the teacher.

What is that child doing for the other 96% of her time? She is learning on her own, and she's learning from the other children. As the teacher, we have an important role to play in the community, but we know we are not the sole source of all learning. When children are free to choose the materials they want to use, and free to explore all of the lovely hidden secrets so thoughtfully designed within, then they can really learn from the materials. They have to try new things and make mistakes because it is in the mistakes that learning takes place. Learning comes when we encounter something that doesn't fit our previous understanding. "Oh! Wait! This doesn't work! This

isn't like that!" Exploration elevates the children's work with the materials from the "what" to the "how" and the "why."

It is not only from their individual work with the materials that children learn. Once children discover something, it is only natural to want to share it. "Hey! Look at this!" If the children have the liberty to move and interact freely within the classroom, they seek out one another; they find the experts, they ask questions, they watch each other, they talk to each other, they interact with each other. Learning is not an isolated process of absorbing facts; learning

Courtesy of Jamie Rue

is a cultural and social exploration of engaging with a constantly changing environment. Our classrooms are not "teaching-based" environments; they are "learning-based" environments.

When we explore within a learning-based environment, we do more than create content, we build context. Meaning comes from the context, not the actual facts themselves. A classic example of the relationship between meaning and context happens when we change the background music of a film story. The facts of the story are the same, but the meaning is changed by the emotional context of the background music.

When we pay attention to the context, learning becomes more than the simple transfer of facts or information, it is bound to the context that is created. It is these connections that give meaning to the content; it becomes less about the "what," and more about the "where?" "What" is about learning a fact in isolation, but "where" is about learning how a fact relates to everything around it, and how it fits in to the bigger picture. This creates a cognitive flexibility that supports the shifting and moving of information as we evaluate it in the context of a different story.

When children explore, their work changes from "*learning* the story," to "*becoming* the story." If we give a presentation and the child repeats it just as we did, he is "learning the story." But through exploration and questioning, interactions with peers, and the ever-changing context of our environments, the child "becomes the story." Active engagement in the process of learning is tied to passion, interest, and free choice, and the child becomes, for a time, "the gardener," "the snack helper," "the Africa map expert," the "bow tie-er." The child then shifts in and out of these roles, redefining himself as he learns and grows. This is the process of cultural adaptation.

Our tacit knowledge, the kind of knowledge that grows through personal experience and experimentation, becomes part of who we are and how we define ourselves. Tacit knowledge is often unsaid yet is deeply understood, and the more we explore and ask questions, the more we engage with the tacit dimension of knowledge. How do children under six ask questions? Sometimes by asking questions! But young children are also asking questions through their

actions: when they experiment, when they try something different, and sometimes even through a bit of "naughtiness."

Exploration builds tacit knowledge, which becomes embodied in the child and helps develop interests and passions. Following their interests and passions is conducive to concentration and provides the opportunity for more exploration. This cycle of experience is the difference between passively "listening to the story" and actively "becoming the story." This embodied cognition becomes the child's work: self-construction on one hand and cultural adaptation on the other–becoming and belonging.

Through it all, exploration is the key. Even if we go back to our work this morning, and we look at our Five Domains of School Readiness through the lens of exploration we can determine if we are giving children the opportunity to thrive and fully develop their potential or if we are just delivering curriculum. That's not scary; it's exhilarating. It's liberating.

Children are born explorers, and giving them the liberty to explore their physical and motor skills helps them to develop in a healthy and happy manner. Social and emotional development is another opportunity for exploration. Through supporting pro-social interactions with others, we are helping children adapt to their time and place, becoming and belonging to their people with confidence and connection. Exploration is at the heart of a positive approach to learning. If children learn through exploration, they can't help but follow their own interests and passions and thus developing a life-long commitment to joyful learning. Our entire approach to language development is exploration. Our goal is to help children make key discoveries about their language, how it works, and its power and passion. If we put language exploration at the center of our language presentations, they come alive and children become joyful communicators. And of course, exploration is the key to

> Exploring those abstractions liberates our imagination. It is our imagination that makes us human, both preserving and perfecting our human spirit. Without the dynamic energy of exploration, our human tendencies become static and lifeless.

developing cognition and knowledge. We are not here to teach the children facts about the world; we are here to facilitate exploration of the wonders of the world and its people.

In *From Childhood to Adolescence*, Montessori advises, "To teach details is to bring confusion, to establish the relationship between things is to bring knowledge" (58). When children explore, they move beyond the details and begin to uncover relationships: the relationships between and among all life, the context that drives the way people and things behave, and the connections between action and the resulting consequences. When we understand relationships, we have compassion, wisdom, courage, perseverance, creativity, and love.

This is why I want people everywhere to pay attention to Montessori education. Personally, I don't think Montessori is the only path to happy, healthy development. Great teachers and great schools are found in many different educational arenas. But the reason those teachers and those schools are great is because they understand the universal principles of human development and they support them.

What *is* unique about Montessori education is not the outliers, that one awesome teacher in that one great class. In Montessori, you don't have to buck the system; you don't have to try to make your program work despite the oppressive standardized testing; you don't have to fight for the rights of your children to follow their own interests and passions even if they don't comply with the standard curriculum. Children's interests and passion *are* the curriculum!

What all great educators know about releasing human potential is the central, organizing principle behind every Montessori teacher, every Montessori classroom, and every Montessori school, but we must have the courage to make it happen. I don't know of another organized educational or social movement that has the power of Montessori to make such a large-scale difference in the lives of children throughout the world. Whether we are talking about domains of school readiness, or supporting executive functions, or developing creative entrepreneurs to solve the problems of the future, Montessori education can deliver, because at the heart of

each of these rubrics is belief in the greatness of human potential. We leave no child behind.

Maria Montessori harbored a profound hope for humanity. When we support the human tendencies, each child's character develops the way nature intended, and education becomes a completely different endeavor. As the children grow and develop into truly socially responsible young people, they are capable of pulling society up along with them to a higher moral level. They can create an adult society that is grounded in the social cohesion that became imprinted on their souls when they were small. This is why Montessori considered the education of the littlest ones as paramount to a peaceful world.

Little children approach the world with love, and, as Montessori wrote in *Education and Peace*, "Love impels the child not towards the possession of an object, but toward the work he can do with it. And when work begins in a certain environment, association with one's fellows also begins, for no one can work alone. But if this does not happen – if something prevents the individual from acting–he begins to want to possess the things all around him. Rather than working together with others, the child quarrels with them. The result (then) of his association with others is not collaboration but conflict. Two paths lie open in the development of personality–one that leads to the man who loves and one that leads to the man who possesses" (58).

And that, my friends, is the true social relevance of Montessori education.

References

Achor, Shawn. "The Happiness Advantage." May 2011 <http://www.ted.com/talks/shawn_achor_the_happy_secret_to_better_work>.

Alber, Rebecca. "How are Happiness and Learning Connected?" August 25, 2013 <http://www.edutopia.org/blog/happiness-learning-connection-rebecca-alber>.

Brown, John Seely & Thomas, Douglas. *A New Culture of Learning: Cultivating the Imagination for a World of Constant Change.* n.p., 2011.

Burkam, David & Lee, Valerie. *Inequality at the Starting Gate.* Washington, DC: Economic Policy Institute, 2002.

Diamond, Adele. "The Evidence Base for Improving School Outcomes by Addressing the Whole Child and by Addressing Skills and Attitudes, Not Just Content." *Early Education and Development* 21.5 (2010): 780-793.

---. "Turning Some Ideas on their Head." November 2013 <http://tedxtalks.ted.com/video/Turning-some-Ideas-on-their-Hea>.

Gopnik, Alison. *The Philosophical Baby.* New York, NY: Farrar, Straus and Giroux, 2009.

Herron, Jeannine. "Why Phonics Teaching Must Change." Association for Supervision and Curriculum Development 66.1 (September, 2008): 77-81.

Montessori, Maria. *The Absorbent Mind.* 1949. Madras, India: Kalakshetra, 1984.

---. Advanced Montessori Method. Vol. 1. 1918. Oxford: Clio Press, 1991.

---. "The Child." *Montessori Principles.* Amsterdam: AMI, 2003.

---. *Creative Development in the Child.* Vol. 1. Madras, India: Kalakshetra, 1994.

---. *The Discovery of the Child.* 1948. Thiruvanmiyur, India: Kalakshetra, 1966.

---. *Education and Peace.* 1949. Oxford: Clio, 1992.

---. *From Childhood to Adolescence.* 1948. Oxford: Clio Press, 1994.

---. The Secret of Childhood. 1936. Chennai, India: Orient Longman, 2006.

---. Unpublished London Lecture #24. From *Lectures Held By Dr. Maria Montessori During a Montessori Training Course in London 1946: Theory of Materials and Presentations.* Amsterdam: AMI.

Montessori, Mario. Unpublished London Lecture. Lecture delivered October 11, 1946. From *Lectures Held By Dr. Maria Montessori During a Montessori Training Course in London 1946: Theory of Materials and Presentations.* Amsterdam: AMI.

National Conference of State Legislatures. State Approaches to School Readiness Assessment. December 2014 <http://www.ncsl.org/research/education/ncsl-technical-report-state-approaches-to-school.aspx>.

"National School Readiness Indicators Report." February 2005 <http://www.gettingready.org/matriarch/d.asp?PageID=303&PageName2=pdfhold&p=&PageName=Getting+Ready+-+Full+Report%2Epdf>.

Samuels, Christina."Pre-K Suspension Data Prompts Focus on Intervention." *Education Week*. March 2014. <http://www.edweek.org/ew/articles/2014/04/02/27ocrprek.h33.html>.

Stephenson, Margaret. "Montessori: An Unfolding–The Child from 3-6." AMI conference proceedings from The Child–Man of Tomorrow. Atlanta, Georgia, October 9-11, 1970.

Zhao, Yong. *World Class Learners*. Thousand Oaks, CA: Corwin, 2012.