500 schools and counting in the Montessori Census – but we know there are more. Stand up and be counted!

BY NCMS STAFF

In 2014, when the last issue of Public School Montessorian came out, the Montessori Census listed 490 public programs. We know there were more than that even then, since, try as we might to encourage schools to register and be counted, not every school does. (Is your school’s information up to date? Check it out at montessoricensus.org!)

Today, that number stands at 511. 21 schools in two years: That’s a lot, and a little, at the same time. 21 schools in 11 states is great in absolute terms. But as a growth rate, ten schools a year is just 2% per year. At that rate, we can expect to double our reach by...sometime in 2052! Not soon enough.

But actually, it’s a little better than that, for three reasons. First, we’ve been adding (to the Census) better than twenty schools a year for the last few years – 22 in 2012, 24 in 2013, 24 again in 2014, 18 last year – and there’s no reason to think that has slowed down. That’s more like 4% per year, which doubles by 2034.

Second, we know not every new school gets in the Census. Maybe they don’t know it exists, or just maybe the pressure and intensity of getting a new program going is so all-consuming that a detail like this just can’t be a priority. Just this year, Detroit launched eight classrooms in three schools, Racine, Wisconsin started four, and Syracuse and St. Paul have new programs as well. We would love to have them represented in the count.

Finally, public programs often start big and get bigger. The private schools in the census top out at 470 children, with only 20 (of the 1500 or so listed) at 300 or above. Public programs go up to 1376 (Yonkers Montessori Academy in New York), and 130 of the 500 or so schools enroll 300 or more. Not every program keeps is enrollment up to date in the Census, and schools that add classrooms as they grow don’t show up in the school count.

All of which is to say, stand up and be counted! Anyone in public education and public policy knows it’s a numbers game. Numbers of children present on “Count Day” translate into state funding dollars. Numbers of families with children in public Montessori schools count into registered voters. And numbers of schools, and children enrolled, translate into impact. Registering and updating at www.montessoricensus.org is easy, fast, and counts for a lot.

The National Center for Montessori in the Public Sector

NCMPS provides coaching and leadership support, teacher residencies, and Montessori assessment tools

BY DAVID AYER

The National Center for Montessori in the Public Sector (NCMPS), founded in 2012, is a non-profit organization dedicated to expanding access to Montessori education and strengthening existing public Montessori programs.

Beginning in 2011, Rich Unger, Executive Director of the American Montessori Society (AMS) was the driving force behind the Center’s creation. His work with NCMPS founders Keith Whitescarver and Jackie Cossentino, after meetings with AMS leaders, school reform advocates, academics, and journalists, led to a startup grant from Judith Scheide and New York Community Trust.

Originally affiliated with AMS, NCMPS launched independently in 2012 with support from the AMS leadership and funding along the way from The Trust for Learning, The Harold Simmons Foundation, The Walton Family Foundation, and individual contributors.
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Pulitzer Prize-winning columnist for the New York Times; journalist; best-selling author

JESSICA LAHEY

SONIA MANZANO
Sesame Street’s ‘Maria’; Emmy Award-winning actress and writer; best-selling author

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Public School Montessorian is now MontessoriPublic

Under Denny Schapiro’s tireless leadership, PSM thrived. Now we pick up where he left off

BY DAVID AYER

28 years ago, when the late Denny Schapiro launched Public School Montessorian, “the Montessori community newspaper”, the public landscape was very different. The Montessori Census shows just 30 public programs going that far back. Milwaukee Public Schools had just three of its ten current programs. Arlington, Virginia had four of eleven. Texas had two of what is now more than 30.

“Hard, Lonely Work”

But in 1988, Schapiro saw an unmet need. At that time, working in public Montessori was “hard, lonely work,” in the words of Mark Anderson, a longtime PSM contributor. Those 30 schools were spread across 19 states, with ten of them the only school in their state. Within the public system, those teachers and leaders were strangers in a strange land, often misunderstood and deprecated by their conventional education colleagues. Even within the movement, public Montessori was at times regarded with suspicion, and seen by some as compromised or watered down. National Montessori organizations (for complicated institutional and political reasons) were slow to throw their full support behind public Montessori.

Schapiro had been a journalist, public school teacher, and education professor, and his children attended a public Montessori school in Minneapolis, where he learned first-hand about the challenges of public Montessori. He knew other similar schools around the country were facing the same problems, and he launched Public School Montessorian to connect with them, share information and resources, and work together to find solutions. As it turned out, there was a market for this connection, and as the public Montessori movement grew, Public School Montessorian grew with it.

Schapiro was not just a reporter, but an advocate as well. He gathered and shared data on the schools he covered – How did their test scores compare? How did they pay for Montessori materials? How did they balance Montessori curriculum and teacher training with state requirements? How were they keeping up enrollment? He built a database that fed directly into the 2014 Montessori Census project, which continues to gather national data. He went to national events for organizations large and small, and (by one account) set up Public School Montessorian with the movement’s first toll-free 800 number.

The newspaper grew and thrived, and reached far beyond the public school world, living up to its tagline as “the Montessori community newspaper”. Many Montessorians first encountered it in private schools thanks to Schapiro’s tireless distribution. The paper hosted writers from across the Montessori spectrum, notably including the late AMS Lifetime Achievement Award recipient Lakshmi Kripalani and veteran AMI Elementary Guide and author John Snyder (featured in this issue). When Schapiro passed away in 2014, he left a space that no one individual could fill, and the newspaper ran its last issue.

NCMPS and MontessoriPublic

At the beginning of Schapiro’s work, there was no national organization focused on public Montessori, and that remained true through several decades. But in 2012, the National Center for Montessori in the Public Sector launched (story on page three), and in 2014 the organization was ready to consider taking on the publication. Conversations with Schapiro’s family ensued, and an agreement was reached to relaunch the newspaper in digital form, with the resources of an institution behind it. In April 2016, Public School Montessorian was reborn as MontessoriPublic – a website, Facebook page, email newsletter, and even a Twitter feed. That 800 number was a bold step into the modern world.

MontessoriPublic picks up where Public School Montessorian left off. We run in-depth public school profiles for schools as small as Alder Montessori in Portland and as large and well-established as Tobin Montessori School in Cambridge. We highlight the current explosion of Montessori research, including the newly launched Journal of Montessori Research and the massive Furman study in South Carolina (story on page four). We cover the changes in public Montessori, such as the emerging Montessori for Social Justice movement. We explore the frontiers of Montessori for the public, with stories on tuition-based, access-oriented programs across the country, Montessori for developmentally disabled children at the Penfield Academy in Milwaukee, and Montessori for the homeless in South Bend and St. Paul. Public School Montessorian’s Field Notes are now State Updates, sharing the news of new programs large and small as it happens. The website, Facebook page, and Twitter feed bring our readers Montessori public news as it happens, on laptops, tablets, and smartphones.

And now, we’ve come full circle with this Print Edition. To be honest, we weren’t sure a print edition even made sense anymore. Does anyone read print any more? But maybe Montessorians do! There’s something about the concrete, the sensorial, about holding it in your hands and flipping through the pages, that we like the feel of. We’re not entirely sure how this will turn out, or if it makes sense to do it again after this issue. So that’s where you come in. If you like what you’re reading and how you’re reading it, drop us a line, at info@montessoripublic.org. Join the dialogue, and share your voice. Let’s bring Montessori into the public conversation.
Accountability, equity, and human potential: cracking the assessment code

BY JACQUELINE COSSENTINO

The era of high stakes testing may finally be waning. The reauthorization of the Elementary and Secondary Schools Act (ESEA), replacing No Child Left Behind (NCLB) with Every Child Succeeds (ESSA), provides significantly more flexibility in how progress is measured and how schools are evaluated. The provision for multiple measures of achievement is an especially good thing.

But, like all things in education, the effects of NCLB will be with us for a long time. Chief among them is a set of assumptions about what it means to be accountable and what educational success entails. It’s true that NCLB exposed a set of truths about education and equity in America. What came to be called “the achievement gap” refers to persistent disparities between the performance of white, middle class, English-speaking students, and students outside of those categories, on standardized tests. Those disparities are real. But, the concept of a “gap” defined almost exclusively by performance on tests of reading, writing, and math has not served us well.

Instead of guiding us toward educational solutions that address the sources of educational inequity, this discourse has led us to focus ever more narrowly on closing the gap by doing better on the tests. Within the discourse of gaps, this approach makes sense. As many well-meaning reformers have argued, just “meeting standards” on the tests sets a low bar. It’s unconscionable that race and class can predict children’s scores so accurately on supposedly objective measures. If we accept this as a given for public Montessori schools have led me to conclude that they are neither. Despite the veneer of scientific objectivity, there isn’t now, nor has there ever been, a universally agreed-upon standard of what it means to be educated. As a consequence, tests are reliably random in their composition and not infrequently biased. Beyond that, standardized tests are limited in their capacity to predict subsequent performance on anything beyond other tests.

Even more important are the consequences for children. Whatever minor gains children may achieve from poor, black, and brown children, aren’t we just perpetuating inequity? Here’s the problem with that line of thinking: It assumes, without proof, that the tests are (a) legitimate and (b) useful in supporting children. Eighteen years of studying the assessment field and eight years of close analysis inside the discourse of gaps, this approach makes sense. As many well-meaning reformers have argued, just “meeting standards” on the tests sets a low bar. It’s unconscionable that race and class can predict children’s scores so accurately on supposedly objective measures. If we accept this as a given for public Montessori schools have led me to conclude that they are neither. Despite the veneer of scientific objectivity, there isn’t now, nor has there ever been, a universally agreed-upon standard of what it means to be educated. As a consequence, tests are reliably random in their composition and not infrequently biased. Beyond that, standardized tests are limited in their capacity to predict subsequent performance on anything beyond other tests.

Even more important are the consequences for children. Whatever minor gains children may achieve from
“laser-like focus” on academic skills as defined by most tests are far outweighed by the losses entailed in orienting the experience of school toward closing the achievement gap. The culture of “gap closing” creates a deceptive tautology driven not by human potential, well-being, or the capacity to thrive in the world, but by an endless quest to perform better on tests, whatever that takes. When success is defined by testing, testing defines success.

In the case of Montessori education, particularly as it is implemented in the public sector, this condition is particularly acute. Across the nation, well-meaning educators, drawn to the idea of realizing human potential, struggle to fit Montessori into this tautology. Some view Montessori as a better way to close the achievement gap. Others attempt to balance competing demands of narrowly defined achievement and human development. A few attempt to resist the current testing regime. All pursue their respective strategies through complex systems requiring both teachers and children to operate in two worlds, to speak two languages, and to continually check their work against the expectations of the conventional educational establishment.

This is a losing proposition. Montessori education is specific and coherent in its goals, with a clear scope and sequence and an equally transparent set of standards and desired outcomes. Both schools and children should be measured by those standards.

That’s because a fully implemented Montessori program is uniquely equipped to address the true causes of inequity and to situate students for success. As the era of NCLB draws to a close, a growing chorus of researchers, reformers and leaders is expressing resounding agreement on what success actually entails: It is indicated by executive functions, such as inhibition and cognitive flexibility, and by social skills such as collaboration and leadership. To build these skills, school needs to be personalized, hands-on, and deeply engaging to students. It should prepare students not just to pass tests, but to participate in an increasingly complex social, political and economic world, a world in which creativity and innovation are necessary not just for economic participation, but for human flourishing.

Human Potential and Accountability: Measuring What Matters

The idea that Montessori should measure up to conventional education is both warrantless and wasteful. But that doesn’t mean that Montessori should excuse itself from measurement or from assessment. In fact, assessment, in its deepest form, is a cornerstone of the approach.

Maria Montessori had a lot to say about both accountability and success.

Maria Montessori had a lot to say about both accountability and success.

In observing that children are not empty vessels to be filled with adult-determined knowledge, she mapped an educational landscape that Montessori educators have been refining and codifying for more than a century. Within this system, success has little to do with grade level equivalents, college readiness or career prospects. Rather, success is the full realization of human potential. We as parents, educators, and citizens are accountable not to the district or state or even to parents, but to the children.

Human potential, it turns out, is not easy to measure. Its indicators — creativity, adaptability, communication, compassion, and perhaps most of all, reason — are frequently described as “unmeasurable.” But, in fact, they are measurable, and becoming more so by the day. Instruments such as the Minnesota Executive Function Scale (or MEFS, described on page 16) provide highly sensitive assessment of key cognitive functions such as inhibition, working memory and cognitive flexibility. The Evaluation of Creative Potential (EPoC), developed by a team of French researchers, identifies both divergent and convergent thinking through a series of tasks completed by students.

And guess what? When Montessori students are measured using these tools, they not only achieve, they excel. Moreover — and this is really important — they excel regardless of their class or culture. That’s worth repeating: Based on a small, but growing, number of high quality studies, Montessori students have out-performed their non-Montessori peers on measures of executive function, social-emotional learning, and creativity. These studies suggest that even a moderate “dose” of Montessori makes a difference. And the higher the dose, particularly if it’s high fidelity Montessori, the greater the difference becomes. These same students also tend to do just fine on more conventional measures of achievement, though in these tests we almost always notice gaps based on social or economic factors.

These results clarify our task as educators committed to the great work of educating human potential. They call us to dive deeply into all that is implied by that term. Specifically, we must reject the premise that measuring what matters is impossible or that Montessori should measure up to conventional education.

Jacqueline Cossentino, Ed.M., Ed.D, is Senior Associate and Director of Research for the National Center for Montessori in the Public Sector. She previously served as the Head of two Montessori schools as well a member of the faculty of Educational Policy and Leadership at the University of Maryland.

Maria Montessori had a lot to say about both accountability and success.
Talking to children about peace in a time of war

BY JOHN SNYDER

Editor's Note: This excerpt from John Snyder's 2015 book Tending The Light: Essays on Montessori Education is as timely today as it was in 2001. I'm sure there's a range of political views represented in our readership, and this isn't meant to take any one side. But all of us who work with children need to think about how we can talk with them about the anger and fear that can be found everywhere today, and John's loving words help show us the way.

A conversation with older children following the terrorist attacks of September 11, 2001

Children, we have talked about human beings and the special gifts they bring to the world of living creatures: a mind that can imagine wonderful things – things of great beauty that have never before existed; a heart that can hold an infinite amount of love – love even for people we have never seen, people who live far away and have different ways of life; and miraculously skillful hands that can take those ideas from the mind and, through the power of love, make them real, a gift for all humanity.

And yet, my dear friends, I have to tell you the sad part of the story as well. If a child is not loved or has nowhere safe to live or has nothing to eat while others have too much, or is taught by misguided adults to hate those different from himself, then that wonderful human heart that was made to grow a garden of love, can start to grow seeds of fear and hate. Those seeds may even grow into a tangled vine of violence, choking out the love altogether. This is why we care for and guard each other's hearts so carefully in this community of ours. We are helping each other to grow the love in our hearts and not the fear and hate. I am very sorry to tell you that not all children in the world have this kind of help from adults and each other to grow love instead of fear and hate.

When a person's heart is no longer full of love, as it was meant to be and longs to be, then the person's mind and imagination may turn to evil things – things that destroy and hurt and take away the freedoms of others instead of things that make people stronger, more caring, and more able to enjoy their lives. This is a great tragedy, and many wise human beings in all ages and all places have looked for ways to still grow love in their hearts for all people and yet keep their communities safe from those who would harm them.

This is a very hard thing: how to stop people with confused, suffering hearts from harming others and yet continue to love them at the same time.

One of the great human beings who has shown us adults a new way lived in India about sixty years ago. His name was Mohandas K. Gandhi, and he taught the world more about peace than anyone had for thousands of years. Gandhi said that the worst possible thing for human beings to do is to see some evil in the world, to see some harm being done to other people – and do nothing to stop it. Even though he loved peace, he said that it was better to use force and weapons to stop the evil than to do nothing at all to stop it.

Sometimes we adults cannot think of any way to stop the evil without using force and weapons. We are trying, but we sometimes cannot think of any other way. It is so sad for us adults when this happens. We know we must protect our communities from harm, but we also feel very sad when we have to use weapons to do it. We wonder, “What will our children think? These children whose hearts are so full of love and whose minds are so used to thinking about beauty and order and peace – what will they think when they see us taking up weapons?” We hope you will understand that we are doing it to protect our communities so that you can grow up to be adults who may be able to think of ways to stay safe without using weapons.

There is one thing we are not confused about. We are going to do whatever we can to keep all the children safe and healthy.

We know this works when there are enough strong nonviolent people who will work together. Every time in history we have been able to find enough people strong enough to use the power of nonviolent truth, they have won against evil without having to use guns and bombs and other such weapons. But right now in human history we often have trouble finding enough
people who are strong enough and brave enough to make it work.

This is one of the reasons Maria Montessori started the Montessori schools. She wanted the children in her schools to have every possible chance to become the kind of person strong enough to use the power of nonviolent truth.

Right now our country is thinking about what to do to stop the people we call “terrorists” – people who are so wounded inside, who are in so much pain in their hearts and minds that all they can think of to do is to make other people feel the same pain. These terrorists are our fellow human beings, and we must try to love them as we love all people. But we cannot let them continue to cause death and destruction in the world.

Some people are saying we must use guns and bombs to stop them. Perhaps this is true. Perhaps there are not enough of us adults who are strong enough to use the power of nonviolent truth. Or perhaps we are giving up on nonviolent truth too fast. Maybe we are stronger than we think. It is confusing even to us.

There is one thing we are not confused about. We are going to do whatever we can to keep all the children safe and healthy. And we are going to keep trying to create a world in which guns and bombs are not needed – a world where everyone has freedom, respect, safe houses, enough food, an education, a place to worship if they like, and friends to love them. When you children are adults, you will be stronger and know more about peace than we do. When your children are adults, they will be even stronger and more knowledgeable than you are.

Think of it! We have known about the power of nonviolent truth for less than one hundred years, yet we have already used it to make right some powerful wrongs and to bring freedom to many people. When you think of how old the earth is (remember the Black Strip?) and how short human history is, it is really remarkable how fast we are building a peaceful world. We must remember that in the days ahead if we are tempted to think that violence and death are winning out over peace and life.

John Snyder has been a veteran Upper Elementary guide and administrator at Austin Montessori School and is the author of two books, Tending the Light and Infinity Minus One, both of which are available from Amazon.com and the North American Montessori Teachers Association. He can be reached at jsnyder@pobox.com or at his website, ordinarypersonslife.com.

INFINITY MINUS ONE (2016)
In these poems, John explores themes of mortality, aging, the power and limits of language, fathers and sons, and the spiritual quest, in language that is precise, musical, and accessible.

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Accommodations in Primary

Accommodations are alterations in the way tasks are presented that allow children with learning disabilities to complete the same assignments as other students. Accommodations do not alter the content of assignments, …” National Center for Learning Disabilities, 2006

Dr. Montessori never used the term “learning disability” (The term was coined in the U.S. in 1963.) She worked with children – all kinds of children. So, to start, I suggest we Montessori - professional dialogue: we are talking about learning variability, not learning disability.

Within that paradigm, Montessorians specialize in learning variability. We create individualized educational plans for every single one of our students. We do this both in the long term as we plan lessons and in real time while we present lessons. For example, while one four-year-old is ready to learn the sounds of the alphabet, another may already be ready for reading. While we are giving a one-on-one lesson, we may take a little longer here or go faster there. We exaggerate a point of interest or understate it. We make eye contact, we rub a back if reassurance is needed. We adapt to accommodate the needs of the child before us. This is the serve-and-return of the Montessori method.

But beyond this, there are many resources within the pedagogy that we can bring to the aid of children who need it. If you’ve ever been present when a child receives “services,” you may have already recognized this. Why? Because the prepared primary environment meets the needs of all humans, both standard-issue and utterly unique. Let me give you a few examples of how we can apply the method just as we would apply an accommodation in an IEP.

For Social Difficulty: Explicit Grace And Courtesy

My mentor and friend Susan Stephenson was staying at our home when she saw my three-year-old son constantly bumping into things. He would walk/run and crash into the cupboard, the table, the piano, or other people. So, she gave him a lesson on “How to stop before you hit something.” And they practiced running right up to things and stopping just in time. What a blast! Before this, I thought “grace and courtesy” just meant things like “please”, “thank you”, and “welcome to our room.” I just didn’t realize it meant you could teach the child absolutely anything they needed to know. Charging into both things and people was definitely getting in the way of my son’s relationships. But he didn’t need a lecture or a role model – he needed practice judging distances and then stopping himself.

When you notice children having trouble working well with others, speak with tremendous volume, create a lesson on, “How to speak so softly that someone can just hear you.” If they scowl at others, bring them to the mirror and give a lesson on, “How to make a face that people like to see.” The key is to observe so you can discover the precise challenge they face and help them overcome it.

Soon, you may see your worst offenders turning into police officers, reporting on every transgression of every other child. This is a most excellent sign…even if they are still the worst offenders. It means they have seen the light! Once their inner discipline develops, they may just be able to walk the talk.

For Processing Difficulties: Isolate the Stimulus

Some children have trouble taking in and processing certain kinds of information. You’ll see them blinking, squinting, looking away, covering their ears, leaning back and balancing in their chairs, chewing some things for a very long time, and more. Sometimes the challenge is with the sense of touch, hearing, and/or vision. Sometimes it is language-based. For all of these, Dr. Montessori has given us a way to help: isolate the stimulus. After all, that inner “flashlight” that is supposed to shine on just what the child needs won’t work unless the room is dark and you have fresh batteries.

Keep in mind that the brain has a limited overall capacity. If a child is spending all of her brain resources on trying to hear, she’ll have little leftover to work on remembering a complex series of steps. So, if sounds overwhelm them, dampen the soundscape. If they can’t hear the sounds in language, articulate slowly and increase the volume. If visual stimulus prevents them from concentrating, create visually protected work areas. If they are squinting, put a light on their work. The point is to use less brain capacity on distractions so they have more available to learn something new.

Above all, get them talking and singing. Tell your own true stories and invite them to share theirs

For Sequencing Difficulties: Explicit Preliminary Exercises

Some children are not yet ready to follow a long sequence of steps. These children may become confused, frustrated, or lose their attention very early on in a work. They may also get a bit mischievous or ‘charming’ as they draw your attention away from what is tricky for them. If you suspect they may have difficulty with order, look to preliminary exercises.

Don’t limit yourself to the standards like pouring water, using the faucet, using a clothespin, or folding an apron. Think about the more complex activity you are hoping the child will be able to do, and break it down to its components. If you have a child who is flooding the classroom, teach them how to fill and empty a pitcher. Go to the sink. Fill the pitcher. Empty the pitcher. Go back to the table to dry it and then repeat. Once they can do this, add in a pail. Fill the pitcher at the sink and pour it into the pail at the table. Empty the pail at the sink. Dry and repeat.

Remember that preliminary exercises have no need for an aim in and of themselves, but the children don’t care about that. They want to do it because they are trying to master something. Use your observations to guide you and create the custom preliminary exercises the child needs.

So, if table scrubbing seems impossible, practice laying it out and putting it back….no water, no scrubbing, just setting it up on the floor cloth and putting it back in order on the tray. Lay it out, tidy it up. Lay it out, tidy it up. If they know their numbers but their decimal cards are a jumble, practice setting out the cards and putting them away. Set them out, put them back. If they can’t get to the 54 steps of flower arranging, offer them pre-measured and
cut flowers for a simpler activity until they’re ready for the more complex one.

For Internal Disorder: Extreme Precision, Predictability, and Repeatability

Dr. Montessori taught us about the child’s intense sensitivity to order. Today’s researchers would say the young child’s cognitive flexibility (a foundational skill for executive functions) is just developing. Cognitive flexibility means the ability to adjust when things don’t go the way you think they’re going to go.

When you see a child cry, act out, or have a tantrum and you can’t tell why, it may be that something is out of order. This could be a cognitive capacity issue. There is only so much that the child’s brain can do at once. If they are spinning their wheels trying to figure out why things are different from how they ‘ought’ to be, they can’t be focusing on the modes of activity.

We can accommodate this developing skill by making things as consistent and predictable as possible. Think of this as an extreme sport. It means that the way we show the children to use two hands to simultaneously tear off a paper towel in a preliminary exercise is the same way we get a paper towel…every time. The way we show them to use two hands to squeeze a sponge is the way we always squeeze a sponge. The way we teach them to get someone’s attention is the way we get anyone’s attention. The way we turn on some quiet music to indicate the end of the work cycle is the way we are always going to signal the end of the work cycle. Reliable routines and predictable human movements are a tremendous support to the developing child.

For Reading Difficulties: Explicit Spoken Language

If you are working with children in poverty, chances are high that they are exposed to dramatically fewer words per day than their more affluent peers. These children need more than natural conversations to help them catch up. They need a rigorous daily dose of explicit spoken language lessons and activities. You must take this invisible part of the Montessori method and make it a physical presence in your room.

For example, each week, choose a song, a poem, and a tongue twister. Print them out on cardstock and display them on your spoken language shelf. Present each one every day for the

The key is observation

BY CARLY RILEY

Dr. Montessori’s application of the scientific method relies on careful and ongoing observation of the children in your classroom. When children are facing academic challenges or demonstrating unskillful behavior, our brains are hardwired to focus on the areas in which they are not yet successful. (Google the term ‘negativity bias’ if you’d like to learn more about this.) Pausing to clarify what we’re doing before we start our observations can help us to see both what is working and what is not.

First, define the issue. Is the child cognitively on track yet struggling to engage in prosocial behaviors? Are there sensory triggers in the classroom that set them off? Do they lay out materials in a disorganized or non-sequential manner or struggle to orient properly to work on a rug?

Next, set an intention around your observations so that they are objective, unbiased, and focused. What is the behavior that most interferes with their social interactions? Does a pattern emerge of when the unskillful behavior occurs? What is the specific work that they avoid or are drawn to and why?

These observations are the first step towards differentiating your interactions with each child and meeting the specific needs of the children in your classroom.

Carly Riley is the Director of the Professional Learning Community and a Founding Lead Teacher at the Libertas School of Memphis, a public Montessori school which serves the children of Memphis, Tennessee.
Volkman: Accommodations – continued

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week. I recommend doing the tongue twisters when you greet the children in the morning. “Good morning! I have a new tongue twister for you: red leather yellow leather, red leather yellow leather…”

Carry a handful of sound game objects in your pocket and pull these out to play sound games while you are waiting in line. And for goodness sakes, play all four levels of the sound game!

Play small group spoken classification games. Begin with simple ones like, “I’m thinking of my favorite foods. Raspberries, oatmeal cookies…” Invite the children to join in. Next time you can get more specific by thinking of types of fruits or vegetables or cars or pets. Find the topics that they are interested in so that you can get them talking! You can also do this to help them develop a true love for language as you prepare them for later word study. This means things like, “I’m thinking of two words that mean something new when you put them together like stars…fish. Starfish.”

Above all, get them talking and singing. Tell your own true stories and invite them to share theirs. Invite them to bring in a picture or book to share. Especially get them talking about art, such as the fine art you hang on the walls, and the classical music you play at lunch. Art is the best because no matter what their opinion is, they can’t be wrong. It’s art! We are guiding them to discover that they have a voice and that they have something worth saying.

In the Face of Negativity: Positivity

I had a student once who would pick up a pair of scissors, hold them behind another child, and pretend he was going to stab her. I had another student who would kick a child for no reason and then appear very pleased with himself once the child cried. I didn’t know what to do so I asked my trainer for advice. She said, “Keep them close to you. Don’t let the other children know they are a problem.” I took her advice and it worked. I held their hands whenever we needed to line up, I warned them in advance when a transition was about to occur and cleaned up with them, I sat them next to me when I gave a lesson to someone else. Most of all, I trained myself to notice anything positive or skillful about their behavior and to notice it aloud.

This last point is especially important if you are working with children in poverty. These children, even from good and loving homes, hear twice as many discouraging comments each day (e.g., “Don’t!” “Stop!” “Quit it!”) than encouraging ones (Hart & Risley, 2003).

Positivity is also critical for children who are being evaluated or have already been diagnosed with a ‘learning disability.’ Specialists may ask us and parents to fill out checklists of symptoms, syndromes, and problems. All of a sudden, we are overwhelmed by everything that is “wrong” with the child. It can seem quite hopeless.

Do all you can to rest apart from this unskillful cultural fad of disease seeking. Instead, focus on the positive and overlook as much as you can. Of course, if behavior is dangerous, destructive, or demeaning, you need to intervene immediately. Do so quietly and quickly. Name the unacceptable behavior and then move the child away. You will likely need to keep them near you for some minutes (maybe sitting next to you while you are giving a lesson). It will take time for them to settle before they will be able to work again. It is okay to be a leader in these situations; don’t expect the children to walk through a peer negotiation strategy. You will address that later in grace and courtesy. In this moment, you want temps to settle and the focus to stay on the work.

The Montessori method has given you what you need to meet the needs of ALL of the children in your room. Researchers like to talk about typical development and atypical development but, the way I see it, there is just human development. We are all simultaneously your standard-issue human and your utterly unique individual.

Dr. Montessori didn’t give us a curriculum; she gave us the scientific method. She could not tell us all the preliminary exercises every child would need. Instead, she told us how to create preliminary exercises. She left grace and courtesy open-ended not only because polite behavior varies from culture to culture, but also because different children need different lessons. We must see ourselves as the scientists she intended for us to be. The children’s behavior, not necessarily their words, tell us what they need. It is up to us to notice and then apply the remedies she left us.

The key to accommodating learning variability is that when a child makes an error in their work or in their interactions with others, it is not a problem. It is an opportunity to see what is out of order inside the child. If you correct too quickly, you won’t see it. Instead, pause, breathe, and if the behavior isn’t dangerous, destructive, or demeaning, fade and observe. When we do this, we create an atmosphere that is not about being right or wrong—it is about everyone doing their own personal best.

Julia Volkman is finishing her Master’s degree at Harvard University where she is researching the mutable alphabet. She is the founder of Maitri Learning, a recurring teaching assistant in Harvard’s Neuroscience of Learning course, a consultant for the National Center for Montessori in the Public Sector, a Montessori mentor, and the mother of two standard-issue and utterly unique humans.
Montessori vs. “Real School”: how science can help

BY LAURA FLORES SHAW

Back in 2007 my children’s Montessori school was on the brink of closure. A bitter dispute between the school’s founders and the board had caused the school’s enrollment numbers to plummet by half within mere months. The head of school was fired, the founders left, many teachers left or were fired, two classrooms at a separate campus were closed, and the school itself was left with one of the worst reputations in town.

But my children still loved their school. And so I did what many other parents have done (or would do): I worked to save the school. In June of 2007, I naively took over as head.

I say naively because though I knew rebuilding the school’s local reputation was going to be tough, what I didn’t know was how misunderstood Montessori education was and continues to be – even by people who really think they know what it is. That made turning the school around exponentially difficult (or, at least, that’s how it felt).

So our administrative team decided to turn our focus away from Dr. Montessori. We didn’t hang a picture of her in the reception area. We quoted her sparingly. And we never used “because Dr. Montessori said so” as the only reason for a particular practice. Instead, we treated responses to parents’ questions or concerns that correlated Montessori with scientific research. Every parent tour or event had both Montessori and science components: here’s how we do xyz in Montessori, this is what the research recommends educators do, and, wow, look at that, we’ve been doing what they recommend for over 100 years.

Did this work? I think so. Not only did we keep the school open, but we doubled the toddler and primary enrollment within one year, grew the elementary program from 8 to 60 students within 7 years, and opened an adolescent program. Now under new leadership, the school continues to grow and thrive, and will serve many more children for years to come.

What we found is that while prospective and current parents loved what they saw in our classrooms, it wasn’t until they started hearing about the “evidence” supporting our methods that their “yes, but what about this” questions lessened. So while showing more Montessori to parents to aid their understanding is important, it’s not necessarily enough to help them overcome the pull of what education researchers David Tyack and Larry Cuban call “the grammar of schooling.”

Neither the grammar of schooling nor the grammar of speech needs to be consciously understood to operate smoothly. Indeed, much of the grammar of schooling has become taken for granted as just the way schools are...the “establishment” that has held the grammar in place is not so much a conscious conservatism as it is unexamined institutional habits and widespread beliefs about what constitutes a “real school.”

When parents choose Montessori education for their children, they’re going against those “widespread beliefs”. So when we only show more Montessori as a way to educate parents, they’re still left vulnerable to the pull of “real school” beliefs – beliefs that go unchallenged by most people simply because they attended “real school.”

But research can help parents to overcome the “real school” belief. We now have a growing body of direct evidence for Montessori. Coupled with a much larger body of research in sociology, psychology, neuroscience, and cognitive science, this evidence supports and validates our practice. Angheline Lillard’s 2008 book, The Science Behind the Genius, was just the beginning.

Education history can also help parents appreciate Montessori. Was conventional school’s design based on how humans develop and learn? No, even the teachers – the very people who work directly with children – had no say in how school as we know it was designed. Instead, superintendents were tasked with creating “real school” in response to urbanization and immigration. To manage this complex task, they embraced industrial business efficiency. They even convinced parents that compulsory schooling was a good thing because they were embracing these forward-thinking efficiency practices. (Reminds me of how ed-tech proponents convince parents that their educational practices are revolutionary and forward-thinking simply because their classrooms have tablets.)

While we continue to gather more direct evidence, there is a great deal of science supporting Montessori that we can and should more effectively use right now to help parents see past their unexamined beliefs about what constitutes a “real school.” And the more parents we can get to understand how children benefit from Montessori, the more they will demand it for their own children. Then policymakers will have no choice but to listen.

Laura Flores Shaw is the lead editor, writer, and founder of White Paper Press. She holds bachelor's and masters degrees in psychology and is currently an education doctoral candidate specializing in mind, brain, and teaching at Johns Hopkins University School of Education.

join us at MontessoriPublic.org
NCMPS began its work sending its principals Whitescarver and Cossentino on a six-month tour of 50 or so Montessori programs all around the country, including stops in Denver, Dallas, Chicago, Milwaukee, Minneapolis–St. Paul, and Puerto Rico. The team had talked to Montessori leaders and education outsiders in the planning process, but they needed to hear from the people working in schools and see what was happening out in the field. There was a very Montessori-like approach from the start: observation based, with continuous improvement. It was the beginning of an ongoing process of watching, listening, trying new things, seeing how they worked in practice, and observing some more.

**2012 to 2015: The Second Period**

After the tour, NCMPS began working in a broad range of areas to support public Montessori. Under Research and Dissemination, the “What, Why, How?” project gathered Montessori data and sparked the Montessori Census, the Developmental Environmental Rating Scale (DERs – see story on page 18), and a soon-to-be-published book by Cossentino, Following the Family. To share their work and the work of others in public Montessori, NCMPS developed their website and blog, drafted policy briefs, developed a series of public Montessori video shorts, and worked with the late Denny Schapiro’s widow Jeanne Andre to relaunch Public School Montessorian as Montessori-Public (story on page 3).

As advocates, NCMPS met with federal and state K-12 and Early Childhood education leaders, made connections to state Montessori organizations, and had begun to refine its mission and more fully develop its stronger programs. Two key challenges for the public Montessori world have emerged as obstacles to growth: the teacher pipeline, and the conflicts between fully-implemented Montessori and the public environment. This includes issues such as funding for three and four year-olds, regulations on class size and student-teacher ratios, testing requirements, curriculum guidelines, and more.

Along with school consultation and communications, NCMPS supports public Montessori implementation and teacher formation with four major initiatives: Coaching and Leadership Support, the Montessori Teacher Residency, tools such as the DERS, and Breakthrough Montessori Charter School, a national laboratory school where NCMPS puts into practice what it learns in the field.

**Public Montessori Coaching and Leadership Support**

NCMPS helps public schools do more and better Montessori by supporting instructional and classroom coaches through Coaching of Coaches, and by supporting school leaders through Leadership Coaching.

**2016 and beyond: Refinement and Extension**

By early 2016, NCMPS had grown to a staff of eight full-time employees, and worked to expand state licensure for Montessori trained teachers. The organization worked with public school systems in Boston, Dallas, and Washington, D.C., among others, to help them develop, expand, and improve their Montessori programs. And they began important work to address the “teacher pipeline” issue. This crisis, found not just in Montessori but everywhere in education, goes beyond a simple teacher shortage, extending to attracting people into the profession, preparing them adequately for the challenging work of serving in high-need public settings, and supporting them in their first years in the classroom so they will stay. The Montessori Teacher Residency (MTR) and Coaching programs emerged from this work.

**Montessori Teacher Residency**

NCMPS helps public schools do more and better Montessori by supporting instructional and classroom coaches through Coaching of Coaches, and by supporting school leaders through Leadership Coaching.

**Coaching Support**

**One-one-one support:** NCMPS helps schools develop their own Montessori Coaches with our Coaching of Coaches program. NCMPS provides a program of on-site visits and telephone support tailored to individual schools’ needs and resources.

**Coaches Workshops:** School staff working to support classroom practice, whether they are working with NCMPS or on their own, can take part in a Coaches Workshop, an online group of three to six coaches facilitated by an NCMPS Coaching Leader, which meets biweekly throughout the school year. Coaches learn best practices, problem-solve collectively, and share challenges and successes. The Coaching Leader makes an initial one day site visit for schools joining a Workshop.

**Coaching Symposium:** Once a year, NCMPS convenes classroom coaches and NCMPS Coaching Leaders, as well as school leaders and NCMPS Leadership Coaches, for a day-long workshop to share resources, learn from one another, and develop their programs as Coaching Schools.
FEATURES

SCHOOL LEADERSHIP SUPPORT

One-on-one support: NCMPS offers Leadership Coaching for principals and other administrators who want support with public Montessori implementation through individually tailored programs of onsite visits and telephone support.

Leaders Workshop: Similar to the Coaches Workshop for implementation coaches, the Leaders Workshop meets online biweekly through the school year, facilitated by an NCMPS Leadership Coach.

Coaching Symposium: Leaders join classroom coaches in the annual Coaching Symposium to share resources, learn from one another, and develop their programs as Coaching Schools.

Residency

MONTESSORI TEACHER RESIDENCY

NCMPS’ Montessori Teacher Residency (MTR), inspired by successful public education teacher residencies in Boston and Chicago, helps schools build a pipeline of trained teachers, along with additional support for working in high-need public settings and ongoing job-embedded professional development.

Montessori Teacher Residency consists of three key elements: Training, Surround, and Culture.

Training: High quality, deeply grounded Montessori teacher training is essential to successful implementation. NCMPS helps schools partner with local training centers, or develop their own MACTE-accredited training program according to rigorous NCMPS design principles.

Surround: The Surround is additional coursework supporting Montessori implementation with high-need populations. Courses cover the effects of trauma on child development, special education in a Montessori context, language delays, and more.

Culture: The Culture is a whole-school focus on continuous improvement guided by Montessori principles and supported by professional development, workshops, and coaching.

RESIDENCY MODELS

Partnered Residency: Training is provided by an existing AMI or MACTE-accredited Montessori training center meeting NCMPS Montessori butes, which highly correlate with the development of executive function, linguistic and cultural fluency, and social fluency and emotional flexibility. The DERS is being piloted this year in dozens of classrooms. As an environmental rating scale that measures important developmental criteria and reflects the strengths of Montessori classrooms, it has the potential to be an important public policy tool as well as a support for improved practice.

The need has never been deeper. The demand has never been higher. The National Center for Montessori in the Public Sector is proud to assemble leadership, resources, and innovation to bring more Montessori to more children.
Montessori in a bilingual public school

Montessori was the perfect match with the Dual Language Model

BY CRISTINA ENCINAS

The Latin American Montessori Bilingual Public Charter School (LAMB) was founded in 2001 by the Latin American Youth Center, a Washington D.C. non-profit serving Latino youth since 1968. The school’s vision was to provide quality bilingual Montessori education to District residents by bringing together Spanish and English speaking students to share language and culture, allowing all students to reach their fullest potential. From the beginning, we knew that we wanted to offer Montessori education, and to provide disadvantaged children with the opportunity to develop academic skills necessary for continued learning, in a multicultural environment where children share language and culture.

The Dual Language Model

We opened in 2003 with 57 students in a small church in northeast D.C. In 2001, to start our charter process planning year, we visited every U.S. Montessori bilingual charter school we could. We found some private schools that were able to successfully implement second language immersion, and just one public charter school in Colorado with a Dual Language Model (DLM).

DLM, also known as Two Way Immersion, or Dual Language Instruction, refers to instruction given in both languages to a mixed group of children, rather than full immersion in English. The model has been around for many years and has been proven to develop higher academic skills when compared to monolingual schools. Creating a strong Spanish culture is very important to balance exposure, and to provide children the real meaning of becoming bilingual.

We also looked at other successful dual language schools, since DLM Montessori schools were so rare. We wanted to develop Cognitive Academic Language Proficiency (CALP), a much more ambitious goal than Basic Interpersonal Communication Skills (BICS), and for that we needed at least five to seven years of second language instruction. We made the decision then to only accept three and four year olds (which are funded for D.C. charters), to give each child as much as seven or eight years of dual language instruction prior to moving on to middle school.

DLM and Montessori

Very early we saw Montessori as a perfect match with DLM. Multi-aged classrooms allow younger children to have older second language models who have been immersed in the language for at one or two years, even when the population of Spanish dominant students is less than 30%. LAMB opted for maximum language exposure, as the charter lottery gives no guarantee of Spanish language dominant children enrolling.

Implementing DLM in Montessori required us to think strategically about language instruction. Research shows that successful second language instruction programs have more second language exposure in the early grades. This, and the diversity of our population, pointed us towards an 80/20 Spanish/English model for primary students. We wanted to make sure that Spanish-dominant students from disadvantaged backgrounds, with more than one risk factor, could develop a strong foundation in their first language, while English-dominant students could learn Spanish. Trial and error led us to implement 50/50 Spanish/English in the elementary grades. We went from having English and Spanish instruction in the same classroom to isolating instruction based on language and dividing the Montessori curriculum. Currently we divide the Montessori curriculum, delivering social studies and geometry in English, and science and math in Spanish. Children have demonstrated the ability to transfer knowledge between content areas since instruction does not include translating content.

Successes and Challenges

LAMB, now in its 13th year of operation, has been re-accredited by Middle States Association of Colleges and Schools through 2023. We have 426 students, two facilities, and we have been a Tier 1 school since the Public Charter School Board created a performance management framework five years ago. There have been many challenges, from finding Montessori Spanish speaking teachers, to attracting monolingual teachers willing to share and divide Montessori instruction. LAMB has met its academic and non-academic goals every year since it began. This level of achievement has driven demand from District residents, with more than 800 families entering the lottery. As the city’s population shifts, so does knowledge of and about Montessori, DLM, CALP and BICS. With so much demand, competition for entry grows among all segments of the population, not just from Spanish speaking, low income, and at-risk children. The school cannot weight the lottery for income or other risk factors.

Despite strong funding in D.C., dual language implementation requires even more resources, so LAMB constantly seeks funds to supplement its per-pupil allotment. For example, all teachers are required to complete thirty hours of professional development annually, partly in Spanish and partly in English. All teachers and staff are encouraged to become bilingual. Often, LAMB needs to sponsor Montessori training for teachers, or sponsor experienced Montessori Spanish speaking teachers with working visas.

All charter schools face the challenge of facilities. Since we started, we have moved to five different buildings before finding a more permanent home. We currently own a historic building which serves 160 students from PK3 to 3rd grade and we co-locate with another charter school, serving 266 students PK3 to 5th grade. We continue to look for one dream school building that could offer a gym, auditorium, music and art rooms, and enough green space for our children to play.

Despite all the challenges, we are inspired by our students. We know every 5th grade graduate and their family, as we have seen them grow since they started at age three or four. We are committed to providing our students what they need no matter what it takes. We have a great team of professionals. As a team, we always bring to the table new ideas to best serve the children in our care.

At the end of the day, Montessori in the public sector needs to serve the needs of all children. As a pedagogy founded in individualized education, we need to find the way to develop independence, love for learning and continue to spark children’s interest that will allow them to reach their fullest potential. Seeing the metamorphosis of our students is a pleasure! Encouraging children to show their interest and shine is one of Montessori’s great treasures. We know that our children are in a unique situation, and that each and every one of them has a gift to give and a gift to receive. LAMB’s special talent and gift has been the blending of Montessori and dual language model that yields high academic achievement, cross-cultural competencies, and healthy compassionate students committed to making the world a better place.

Cristina Encinas is the Principal at the Latin-American Montessori Bilingual Public Charter School in Washington, D.C.
Montessori Public Policy Initiative: Advocating for Montessori across the U.S.

Montessori is probably the best-kept secret in terms of effective methods for reaching all our students. Policy makers need to know about it and craft legislation that allows it to flourish.

BY CHARIS SHARP

The Montessori Public Policy Initiative (MPPI) is a collaborative effort of Association Montessori International-USA (AMI-USA) and the American Montessori Society (AMS), the two largest unifying Montessori organizations in the U.S. For the last two years (2015-2016), MPPI has brought together leaders from more than 30 states for Advocacy Retreats to learn about and discuss current policy trends and issues in early childhood and K-12 education and their relevance to the greater Montessori community. MPPI marks the first time AMI-USA and AMS have collaborated to affect public policy on both state and national levels for the Montessori community.

“Montessori is probably the best-kept secret in terms of effective methods for reaching all our students. Policy makers need to know about it and craft legislation that allows it to flourish. These gatherings have connected and empowered Montessori advocates across the U.S. to make significant changes in how we work together to make that happen,” said Bonnie Beste, Executive Director of AMI/USA and MPPI Council Member.

Topics of dialogue at both retreats have included how Montessori is affected by and can influence early learning Quality Rating Improvement Systems (QRIS), Montessori teacher credential recognition in early learning and K12 arenas, and access to Montessori public, private, and charter schools, among others. The retreats have included sessions with educational policy leaders such as Libby Doggett, Deputy Assistant Secretary for Policy and Early Learning, U.S. Department of Education, Rebecca Pelton, Executive Director, Montessori Accreditation Council for Teacher Education, Jackie Cossentino, Senior Associate, National Center for Montessori in the Public Sector, and an address by John King, United States Secretary of Education. Secretary King’s video address highlighted the value of his own children’s Montessori experience and the importance of fully implemented Montessori education, as well as the Montessori community’s commitment to diversity and the importance of the continued growth of access to Montessori Public programs. Both of the retreats were made possible by generous support from the Trust for Learning.

As the MPPI Council is a joint venture of AMI and AMS, Council members include Bonnie Beste, Executive Director, AMI, AMI-USA, and Richard Ungerer, Executive Director, AMS and additional AMI-USA and AMS representatives. MPPI also has a Forum, has established a state advocacy list serve where state leaders can share information and support each other on their various paths to favorable legislative and regulatory positions, and through the retreats, has helped to form bonds of support between these state representatives. MPPI is starting to see the “groundswell of activism” through

“shared interests, and efforts at the local, state and federal levels of public policy” that the organization’s mission statement envisioned.

MPPI sees the great opportunity Montessori education has in our present time, as the educational system in our country struggles to stay relevant with current needs of students and the evolving entrepreneurial economy. Through the collaborative efforts of the MPPI Council and state leaders, we can effect the positive change necessary to bring the choice for Montessori education to every child. For more information, go to montessoripublicpolicy.org.

Charis Sharp was Head of School at Cedar River Montessori School in Renton, Washington for seven years, and also served as a Council member for the Washington Federation of Independent School and Interim Director for the Montessori Public Policy Initiative.

Montessori is probably the best-kept secret in terms of effective methods for reaching all our students.

Policy makers need to know about it and craft legislation that allows it to flourish.

THE MONTESSORI WHITE PAPERS

Science and Montessori in plain English

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Minnesota Executive Function Scale (MEFS): measuring Montessori outcomes

EF predicts academic achievement, college graduation, and physical and financial well-being

BY STEPHANIE M. CARLSON, PHD AND PHILIP DAVID ZELAZO, PHD

Reflection permeates Montessori methods. The environment and pedagogy cultivate children’s awareness of their work and self-motivated learning. Reflection is also the key to developing life skills known as “executive function.” Educators and employers are discovering the importance of executive function (EF) skills for preparation for kindergarten entry, college, and the workforce.

Executive function

EF is the neuroscience term for the cognitive skills supporting attention, planning for the future, and generally controlling our thoughts, feelings, and behaviors – skills critically important for school success. With poor EF, children have difficulty listening to instructions, staying on task, and thinking about a problem from a different angle. Research has shown that EF predicts academic achievement, college graduation, and physical and financial wellbeing in adulthood – in many cases, better than IQ. EF also appears to be the key to resilience: Children experiencing extreme poverty who have good EF skills as preschoolers go on to read at grade level and perform well in school.

This growing body of research evidence would not be possible without to develop a measurement tool sensitive to incremental changes in EF beginning at 2 years of age.

The DCCS

Our starting point in the lab was the Dimensional Change Card Sort (DCCS), one of the most commonly used research tools to measure EF in preschool. Children are asked to sort cards into two trays according to a rule (e.g., red ones go here, blue ones go here), and then to switch to a new rule using the same cards (e.g., frogs go here, butterflies go here). This is tricky for young children because to make the switch, they need to reflect on the game: they have to hold the new rule in mind (working memory), suppress the old rule (inhibitory control), and recognize there are two ways to play this game (cognitive flexibility).

No matter which rule you start with, most three-year-olds fail to switch, whereas most five-year-olds switch flexibly. Despite its strengths, the DCCS has limited ability to sensitively capture gradual changes in EF within the preschool years, and it left us wondering about the beginnings of EF in younger children who, despite getting a score of zero on the task, surely had some nascent EF abilities.

Building the MEFS

With funding from the National Institutes of Health, we developed a scale above the DCCS, including several easier and harder levels, ordered in complexity. The outcome of this research is an app released in 2014: the laboratory batteries of EF measures, and with school readiness assessments. It also predicts academic outcomes in reading and math into first grade, over and above IQ. (We are awaiting longitudinal results of third-grade outcomes.)

Using the MEFS

Today, the MEFS is available to others through our company, Reflection Sciences, along with training in how to administer the tool, as well as professional development about EF and how to use your data to make informed decisions. Researchers use the MEFS in ways that continue to validate it (i.e., its neural correlates), as a pre- and post-test for an intervention study, or if they simply want a quick reliable measure of EF to include in a study. Educators are using the MEFS for a variety of purposes. Some public schools use the MEFS as a universal screening tool for rising kindergartners, to assist with classroom placement, integrating children with varying EF skills, and to know from the first day of school which students are most likely to need additional supports in this area.

Several districts and non-profits are using the MEFS to help evaluate a program or curriculum. For example, if they are trying a new socioemotion- al skill-building program and want to know if it is actually improving children’s underlying EF skills, they might compare the MEFS scores of students who received the program to those who did not, or examine the average MEFS scores year over year. These data can help administrators make informed decisions about program investments to best achieve their goals.

MEFS and Montessori

In Montessori schools, researchers have found that classroom environment and pedagogical practices true to the Montessori method are associated with better EF. We believe this is because traditional Montessori education embeds reflection into nearly every task, cultivating the ability to pause, remember your goal, consider your options, persist at a task, and wait for your turn with the limited materials. Thus, MEFS scores are likely to be higher among students in classrooms that adhere closely to these principles, as measured by the Developmental Environmental Rating Scale (DERS). To test this idea, Reflection Sciences has partnered with the National Center for Montessori in the Public Sector to offer the MEFS to schools throughout the United States. (Learn more at www.ders-app.org.) If the correlation holds up as expected, we will have a powerful tool for measuring and validating Montessori effectiveness.

Montessori education embeds reflection into nearly every task

valid and reliable measures of EF. Measurement can be challenging, however: we would want to assess the early emergence of EF in toddlers and the often-delayed skills of children from low-income families. Moreover, given that EF skills develop gradually into one’s twenties, a measure useful across the lifespan would be ideal, without having to switch assessments for older children and hope that they are measuring the same thing. This inspired us Minnesota Executive Function Scale (MEFS™). The MEFS captures the development of EF from age two and up, with norms and user-friendly administration on a tablet. It is adaptive to the child’s current ability level, and takes four minutes on average to complete. Scores are stored in a secure cloud server and immediately available to administrators through a web portal.

Children’s performance on the MEFS is correlated with lengthier
Montessori academic progress: Redrawing the MAP

The primary goal is to determine patterns in the performance of Montessori students attributable to the Montessori educational program

BY KATIE BROWN

The National Center for Montessori in the Public Sector (NCMPS) is continuing its efforts to illuminate the links and gaps associated with Montessori education and traditional approaches to assessment. One important national test is the Northwest Evaluation Association (NWEA) Measures of Academic Progress (MAP). MAP is a computer-adaptive test of reading and math, available for grades two through twelve, used to measure student growth and compare student performance to grade level standards in over 7,000 schools, including 96 Montessori programs.

NCMPS is currently partnering with NWEA to create a Montessori comparison group comprised of the 96 Montessori schools that used MAP in the 2015-2016 academic year. This group includes both public and independent schools scattered across 28 states. All Montessori data will be compiled into a single population-level report, in which “Montessori” functions effectively as a district. NCMPS will analyze MAP performance (with data provided by NWEA) alongside data collected through a survey of current Montessori MAP users. Through this survey, we hope to learn more about how schools prepare for the test, why they use it, and how they perceive the test as an accurate measure of Montessori outcomes.

The primary goal of this initiative is to determine patterns in the performance of Montessori students at both the school and population level, which may be attributable to the specifics of the Montessori educational program. This project will enable NCMPS to look at performance patterns within the Montessori community – close to 15,000 students – as well as compare Montessori as a population to national percentiles.

A related goal is to offer current Montessori MAP schools insights that may enable those schools to address performance patterns. The community of schools that currently use MAP will gain insights into performance patterns and what, if any, relationships may exist between the nature of Montessori process and outcomes, and the structure of the MAP.

Finally, NCMPS aims to use these data to assess the congruence of MAP with the Montessori scope and sequence in order to provide NWEA with insights that may lead to customization of specific MAP items in order to support high-fidelity Montessori implementation. Ultimately, this will hopefully produce a version of the MAP that is more appropriate for use in Montessori schools.

In order to participate, schools must submit a signed data-sharing agreement on school letterhead. All data will be de-identified at the student level, so student privacy is assured. As of this writing, a total of 15 schools have agreed to participate. If your school administered MAP in 2015-2016 and you would like to learn more about how to support this effort, please contact NCMPS DC Regional Coordinator Katie Brown at katie.brown@public-montessori.org.

Katie Brown is the DC Regional Coordinator for the National Center for Montessori in the Public Sector.
Measuring what matters in Montessori – and beyond

The DERS measures what Montessori classrooms do best

BY DAVID AYER

(The following article first appeared on MontessoriPublic – montessoripublic.org – on 10/24/16.)

The Developmental Environment Rating Scale, or DERS, is an important new tool developed by the National Center for Montessori in the Public Sector (NCMPS) for measuring what matters in Montessori and other developmentally responsive environments for children. The instrument measures child and adult behaviors, as well as classroom environment characteristics, proven to support development in three areas: executive function, linguistic and cultural fluency, and social fluency and emotional flexibility. The DERS is the first research-backed tool for quantifying the things Montessori classrooms do well, and which have been shown to support children’s development across a wide range of domains and child behavior characterized by voluntary movement, deep engagement, and persistence, indicate high-functioning Montessori environments. It turns out that these attributes also characterize learning environments which nurture outcomes such as focus, inhibition, working memory, linguistic fluency, and social-emotional learning.

“So what is it, and where did it come from?” The DERS was developed by a team of researchers (like all NCMPS tools) in response to requests from a variety of public Montessori programs looking for meaningful ways to observe in the prepared environment. NCMPS Director of Research Jackie Cossentino explains: “Lots of elements factored into the development of the DERS – from detailed analyses of existing teacher evaluation tools and environmental rating scales, to reviews of the literature on executive functions, to ongoing consultation with practitioners and trainers both in and outside of Montessori.”

The process began in 2013 with an existing tool developed by NCMPS Lead Coach Elizabeth Slade for use in Montessori charter school audits. You can see elements of that original check-list in the fully developed DERS. Attributes such as clean, uncluttered environments; soft, conversational teacher talk; and fluent, multi-sensory learning environments which nurture outcomes, such as focus, inhibition, working memory, linguistic fluency, and social-emotional learning.

“The big breakthrough with the DERS came when we tied these items to meaningful outcomes,” explains Cossentino. “As we analyzed existing tools, such as the ECERS and the CLASS, we discovered two amazing things. First, these tools were never designed with clear outcomes in mind. The second, which should come as no surprise, is that they don’t predict student performance in any but the most general ways. Because Montessori pedagogy is so detailed and so specific, and because researchers such as Angeline Lillard had already demonstrated a link between high fidelity Montessori implementation and high scores on measures of executive functions, we shifted our focus to aligning each and every item to one of five desired outcomes.”

Those outcomes – concentration, focus, and self-control, among others – are part of a well-defined suite of cognitive processes known as “executive functions”, which include attentional control, inhibitory control, working memory, and cognitive flexibility, as well as reasoning, problem solving, and planning. They have been the subject of increasing study in recent years, and have been shown to correlate with success in school, health, income potential, and general life satisfaction. Over subsequent rounds of iteration, and with input from a wide range of researchers and practitioners, including the AMI Global Research Committee, the DERS team built up an inventory of observable items, divided among child behavior, adult behavior, and environmental attributes. Each item was vetted by Montessori teacher trainers and supported by citations from cognitive science literature. The full inventory comprises 60 items, each of which has been shown to support development in one or more of five domains:

- Initiation and concentration
- Inhibitory control
- Working memory
- Linguistic and cultural fluency
- Social fluency and emotional flexibility

The tool began as a pencil-and-paper observation rubric, but it became clear that development as an app for an electronic tablet would have advantages: ease of use (managing the 60 items), as well as data storage and analysis. The DERS app is now being distributed in a series of one-day training sessions around the
country, and schools can begin using it as soon as their staff are trained. The DERS is structured to give immediate feedback to schools and teachers, and can be used in staff development as a tool of continuous improvement.

A Bonus: The MEFS and the DERS-MEFS Network

It’s important to note that the DERS doesn’t directly measure the development of executive functions in children – it only measures the presence of behaviors and attributes known to support the five domains. However, decades of research in the field have produced some extremely highly regarded and well-validated tools for that assessment. One commonly widely used tool has been the Dimensional Change Card Sort (DCCS), which has also been developed into an app called the Minnesota Executive Function Scale (MEFS) by University of Minnesota researchers at Reflection Sciences. Paired with the DERS, the MEFS can tell schools and researchers about the correlation between environment and executive functions.

NCMPS has launched a collaborative project, the DERS-MEFS Network, in which schools can join a community of practice to share data across the network and build a better understanding of the impact of fully implemented Montessori (and other developmental approaches).

I spoke with one school leader who has taken the training about her take on the tool and how she plans to use it. Pam Lynn, founding head of Bergamo Montessori Schools in Sacramento, California, is a 42-year Montessori veteran with three trainings (St. Nicholas in 1973, AMS at Notre Dame in 1975, and AMI at Montessori Northwest in 2009). She remembers hearing Dr. Stephen Hughes speak in 2009 about the importance of getting Montessori into the educational research table, and finding a way to talk about Montessori that is reliable and understood – and thinking, “Good luck with that.” Seven years later, she sees the DERS as meeting that challenge, measuring what matters in a way that has nothing to do with dogma or institutional politics.

Lynn is most excited about helping teachers in her school to “see the forest for the trees.” Even though we all have the goal of the independent, socially and emotionally fluent, linguistically competent child in mind from our training, “somehow these goals can get lost in the details of the presentations and sequences of lessons.” This tool will help her work collaboratively with her staff to focus on what matters most: to create the right conditions to support the development of the child’s powers to optimally learn and to self-regulate. Once that is done, the academics will follow. As Dr. Montessori said: “Normalization is the point of arrival and it then becomes the point of departure.”

DERS Training is organized at the school level. The cost is $1,000 per school, with a required minimum of 3 participants per school (there is no maximum). This cost includes the training session and a one-year DERS subscription, and membership in the DERS-MEFS workshop. MEFS annual licenses cost $5 per child. Breakfast, lunch, and light snacks are typically provided at the trainings. After the initial subscription included with the training, DERS annual costs are as follows:

- 1-5 classrooms: $500
- 6-10 classrooms: $750
- 11-15 classrooms: $1000
- 16-20 classrooms: $1250

For more information or to register for a training, visit www.ders-app.org or contact Amy Corenswet, NCMPS DERS/MEFS Coordinator, at amy.corenswet@public-montessori.org.

David Ayer is the Editorial Director for MontessoriPublic and has worked in Montessori for more than 20 years as a Primary and Adolescent teacher, school administrator, writer, speaker, and advocate.
Landmark study of Montessori education to be released next year

This multi-year study is a solid, foundational evaluation of Montessori education across a wide range of domains and demographics

BY DAVID AYER

(The following article first appeared on MontessoriPublic – montessoripublic.org – on 7/7/16.)

The Riley Institute at Furman University in South Carolina is getting ready to release the full results of the largest, most comprehensive study of Montessori education ever undertaken – a five year, $370,000 study of 45 public Montessori programs by a prestigious educational research institution.

Montessori, as regular readers of MontessoriPublic will know*, is a small but growing area of educational research. Publications such as Angeline Lillard’s Montessori: The Science Behind the Genius and the newly launched Journal of Montessori Research have raised the standard and profile of work in this area, but studies have typically been small in scope as well as few and far between.

Objective scientific study has also been hampered by definitional issues and selection bias. With the term ‘Montessori’ in the public domain, it has been hard to pin down exactly what practices are being studied. And with Montessori most often found in schools of choice, as private, magnet, charter, or even ‘ordinary’ district programs, it has been difficult to filter out socio-economic and parental involvement factors.

Not any more. With this multi-year study, covering dozens of programs, many of them Title I neighborhood schools with no selection effect, featuring a strong Montessori fidelity component, and carried out by independent researchers, we have a solid, foundational evaluation of the implementation and effectiveness of Montessori education across a wide range of domains and demographics.

Data collection for the study is nearly done, but final, fully vetted results won’t be available until later this year, when analysis is complete. Still, principal investigator Brooke Culclasure was able to share some information with me and at a presentation at the AMS Annual Conference in March.

Questions and methods

The study asked five basic questions: 

**Fidelity:** What’s the fidelity of Montessori implementation in South Carolina public schools? This is crucial, because high-fidelity Montessori has been shown by Dr. Angeline Lillard to be associated with better outcomes. Fidelity will be measured with reference to the Montessori Public Policy Initiative’s Montessori Essentials (a joint AMI-AMS project), which cites elements such as a three-hour work period, a prepared environment, and a trained teacher.

**Demographics:** How do Montessori and non-Montessori public school students compare by race, income, background, etc.? This is essential to controlling for differences in populations.

**Outcomes:** How do the Montessori students compare on academic outcomes? Naturally, this is what policy makers tend to focus on.

“Affective Domain” Measures: How do the students compare on measures of work habits, social skills, and executive function? These measures are increasingly seen as important for whole child development, as well as for supporting academic success.

**Teachers:** What are the demographics and perspectives of public Montessori teachers? How do they feel about their work and their impact on students? Answers to these questions have been gathered via surveys to administrators, teachers, and families, from school attendance and discipline records, with standardized tests and “soft skills” assessments, and through direct observation. This last may be the most remarkable element of the study. Trained observers (Montessori guides at the level they observed) made more than 80 randomly assigned, unannounced visits over three years, evaluating classroom climate, prepared environments, presentations, lesson planning, record keeping, and more.

Another important aspect of the work is the independence and validity built into the study. Culclasure and her team are not Montessorians themselves, so the study can’t be disqualified as Montessori investigating itself. At the same time, the research goals and design were informed by experienced Montessori advisers.

South Carolina

Why is this happen in South Carolina? The short answer is, that’s where the public Montessori is.

South Carolina has had public Montessori going back to 1995, in Laurens County District 55, and the NCMPS public Montessori census shows 51 schools serving more than 7,000 students in nearly 300 classrooms – more than any other state by far. Montessori education is integrated into the state Department of Education.

The South Carolina based Self Family Foundation has been an early and consistent supporter of public Montessori in the state, helping (among many other contributions) to found the teacher

*See, for example, this article from our annual Montessori Public Conference: Data collection for the study is nearly done, but final, fully vetted results won’t be available until later this year, when analysis is complete. Still, principal investigator Brooke Culclasure was able to share some information with me and at a presentation at the AMS Annual Conference in March.
The present study is the result of that Institute Board Chair and former U.S. Secretary of Education Richard W. Riley and a nationally recognized leader in education and public policy research. The present study is the result of that initiative.

**Findings and implications**

Fully analyzed results will be published later this year, but researchers shared some preliminary findings at the AMS Annual Conference in Chicago in March.

**Fidelity:** An implementation survey was completed by school principals, with an excellent response rate. Fidelity was assessed according to a number of measures, including age groupings, the presence of Montessori materials, the length of work periods, and Montessori teacher certification. Further analysis will incorporate classroom observations, but the initial results gave 27 of the 42 programs a “high” fidelity score, seven a “mid” score, and zero with a low score. (Eight programs had missing or incomplete responses.)

**Classroom Observations:** Classrooms were assessed on their prepared environments, general classroom climate, student learning, instruction, lesson planning, record keeping and student assessment. Primary and lower elementary classrooms scored at 83-84% on average, while upper elementary classrooms averaged 77%. The highest scores were in classroom climate and student assessment/lesson planning, while the lowest came in the prepared environments and in record keeping. The presence of a full set of Montessori materials was identified as a weakness across programs. Again, more detailed results are still to come.

**Demographics:** The study showed the strongest enrollment at the pre-K level, with good participation through second grade and a steady drop-off through middle school. Public Montessori schools populations proved to be a bit whiter and richer than non-Montessori programs, although not by much.

**Outcomes:** Very broadly, the Montessori students performed better than state averages in writing and English Language Arts (ELA), while scoring a bit below in math. The Montessori students had better attendance and fewer discipline incidents, and slightly more out-of-school suspensions. On the affective domain, Montessori students showed generally higher executive function.

**Teachers:** Montessori teachers generally loved their jobs and would like to stay in them (rather than moving to administration). More than half (58%) expressed some concern about their school’s Montessori authenticity, and about 35% felt professional development could be greatly improved, but nearly all (97%) felt that public Montessori has the potential to be sustained and grow in South Carolina.

All of these results will benefit from more detailed scrutiny to determine underlying causes and appropriate interventions or adjustments. The full results can be expected to influence public policy in South Carolina and beyond, and to strongly influence the public Montessori culture in South Carolina with data, professional development, and a drive towards greater fidelity. Individual schools will have access to their data if they wish to pursue it for self-improvement and development. And, perhaps of greatest importance, the breadth and depth of this study can be expected to provide a foundation for significant further research, within South Carolina Montessori and beyond.

David Ayer is the Editorial Director for MontessoriPublic and has worked in Montessori for more than 20 years as a Primary and Adolescent teacher, school administrator, writer, speaker, and advocate.
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