



The NAMTA Journal

The Holistic Meaning of Inclusion in Montessori Education

Volume 39 Number 3

Summer 2014

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WHAT IS NAMTA?

The North American Montessori Teachers' Association provides a medium of study, interpretation, and improvement of Montessori education. These purposes are accomplished through a widespread communication system of periodicals, an audio visual library, workshops, and research. NAMTA endeavors to create real services designed for the teacher and the school.

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Catherine Nehring and Theodor Hellbrügge, Munich, 2011

IMPLEMENTING INCLUSION THEORY INTO PRACTICE

by Catherine Nehring

Catherine Nehring is a passionate advocate for inclusion and presents a rationale for creating an inclusive Montessori school and details the considerations and guidelines for creating such a school. Beginning with the United Nations Resolution (Article 24) and carefully explaining Montessori's history with "abnormal children," Catherine outlines the barriers to inclusion, the many options for inclusion, and the value of building partnerships with the medical profession.

In this paper I will address four tough questions that parents with special children ask about inclusion in a Montessori environment:

1. Will you take my child?
2. Is Montessori education right for my child?
3. Will my child receive the services he or she needs at your school?
4. How will you support my child who has challenges?

These questions do not have simple answers. The answers are complex and will depend on the knowledge, training, and experience of the staff about the particular challenges a child is facing; the resources available to the school, including additional staff, ad-

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ditional materials/equipment, additional environments; the level of collaboration between the teachers and specialists in the medical community; and the level of partnership between the family and the teachers and specialists on the resource team. Each special child who comes to a Montessori school will have a unique profile in relation to these four components, and it is these four components that will help you answer these parent questions.

The level of inclusion chosen for a child should be based on the greatest degree of inclusion and the most amount of time included that the child can profit from while still receiving the supports they need.

WILL YOU TAKE MY CHILD?

To reiterate what we learned from Professor Dattke about the United Nations' position on inclusive education, here is some of the wording from the United Nations 2006 *Resolutions on the Protection and Promotion of the Rights and Dignity of Persons with Disabilities*:

Article 24-Education

1. States Parties recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels and lifelong learning directed to:
 - a. The full development of human potential and sense of dignity and self-worth, and the strengthening of respect for human rights, fundamental freedoms and human diversity;
 - b. The development by persons with disabilities of their personality, talents and creativity, as well as their mental and physical abilities, to their fullest potential.

Article 26-Habilitation and Rehabilitation

1. States Parties shall take effective and appropriate measures, including through peer support, to enable persons with disabilities to attain and maintain maxi-

imum independence, full physical, mental, social and vocational ability, and full inclusion and participation in all aspects of life. To that end, States Parties shall organize, strengthen and extend comprehensive habilitation and rehabilitation services and programmes, particularly in the areas of health, employment, education and social services, in such a way that these services and programmes:

- a. Begin at the earliest possible stage, and are based on the multidisciplinary assessment of individual needs and strengths.

As an international community, we have determined that persons with disabilities (a) have the right to inclusion; (b) have the right to full development of their potential, including mental and physical abilities, talents and creativity; (c) have the right to habilitation (development of skills not yet developed) and rehabilitation (to restore to normal healthy condition); and (d) the right to early evaluation/diagnosis and early intervention. What is noteworthy here is that both educational and medical aspects of development are included. All children with disabilities have the right to the full advantages of both educational and medical aids/therapies in an inclusive environment.

We Must Work towards Inclusion

As Montessorians, we have the intuition that, yes, Montessori education is for *all* children, but the realization of this is not always achieved and children with disabilities are often turned away or sent away to find what they need elsewhere. Why is this? We know that the Montessori method we have been trained in is based in medical science and that it originated from special educational methods that were developed for children with severe and profound disabilities. What we need to also remember, however, is that although this is where Maria Montessori started, this is not the course she pursued in her life's work. What she developed was a method that emerged from her scientific application of Séguin's (and others') special educational methods to typically developing children. She asserted this repeatedly in her writings.

Before I proceed, I must inform the reader that I speak first of the abnormal child because it was through my study on

it that I came to the splendid results of my experiences and method for the normal child. (*The California Lectures* 261)

Dr. Montessori explains the direction of her life's work:

From the very beginning of my work with mentally retarded children in the years 1898 to 1900, I felt that the methods I was employing were not only a help to the mentally deficient but that they contained educational principles more rational than those then in use, especially since they were able to help a weak mind to develop. After I had left the school for the deficient children, this idea became even more fixed in my mind. Gradually I became convinced that similar methods applied to normal children would lead to surprising development of their personalities.

It was then that I made a thorough study of the so-called "remedial education" and decided to study the education of normal children and the principles upon which it is based. I therefore enrolled as a student of philosophy at the university. I was animated with a deep faith. Although I did not know if I would ever be able to test the truth of my conviction, I gave up every other occupation in order to deepen it. It was almost as if I was preparing myself for an unknown mission. (*The Discovery of the Child* 22-23)

Dr. Montessori dedicated her life to the application of scientific pedagogy to typical children and the development of a theory and method of education based on the revelations of these children through this scientific process. Now, facing directives for both inclusion of children with disabilities and for the full development of their potential, we find ourselves contemplating how to adapt this method for typical children in order to fully meet the needs of atypically developing children with mild to severe or even profound disabilities.

Montessori gave us the answer if we look at what she did: The answer is to adapt Montessori's method using a scientific pedagogy that incorporates current medical knowledge—in other words, a medically enhanced method or medical pedagogy. I will argue that Montessorian's intuitions are correct: The Montessori educational method is for all children, but only if the Montessori method is viewed as Dr. Maria Montessori viewed it, as a scientific method applied to education or scientific pedagogy. Dr. Montessori complained about the Americans who, for efficiency's sake, shortened



Aktion Sonnenschein, Kinderzentrum, Theodor Hellbrügge Foundation

the title of her book to *The Montessori Method*, when it should have been titled, *A Scientific Method of Pedagogy as Applied to Education in the Children's Houses* (this is the title her book still retains in the original Italian language). When viewed as scientific pedagogy, and is reintegrated with current medical science, Montessori education can be broadened to what may be called a *scientific and medical pedagogy*, which comprehensively supports the developmental needs of children with disabilities within an inclusion environment. Scientific and medical pedagogy is an immense vision; nevertheless, this vision was realized by Dr. Theodor Hellbrügge, in partnership with Mario Montessori, in the Aktion Sonnenschein (Sunshine Project) in Munich, Germany.

No Child Left Out: Where All Children Are Included

Aktion Sonnenschein offers what I call a *full-service inclusion*. Scientific and medical pedagogy is practiced through the physical connection of an inclusive Montessori school to a children's clinic and a children's hospital. Teachers and doctors work together in the same building. Doctors and medical specialists/therapists can walk down to a child's classroom and observe how a child functions in

a Montessori environment, which is vastly more informative than seeing how a child functions in a doctor's office or in a traditional classroom. Within this framework of scientific and medical pedagogy, the Montessori materials/environment can be both diagnostic and therapeutic. How does this look in practice? An occupational therapist, for example, can tell a lot about a child's challenges/dysfunctions by observing what materials the child chooses, what materials the child avoids, and how the child works with the materials. The therapist can recommend modifications to the teacher: changes to the material itself, changes to the way the material is used, and changes to the environment that support the child's use of the material. These changes ensure that the child can be successful, ensure that the child is challenged in a way that ameliorates their dysfunction, increase the attraction of the child to the material, support the child's independence, and help the child build the skills needed to progress through the Montessori curriculum. In short, these changes provide the stepping stones to the Montessori curriculum for typical children. These changes lie outside the standard Montessori method and enter the realm of therapeutic education, or *medical pedagogy*, an educational activity that strengthens underlying physiological, neurological, or cognitive deficits/dysfunctions.

Mario Montessori effectively reconnected his mother's life work back to the medical sciences in service of children with disabilities. His heart was in this work, exemplified in his reference to his work with Dr. Hellbrügge: "More than a hope, it is a promise." Aktion Sonnenschein set a remarkable world standard for inclusion, one that is built on the foundation of Montessori education and practice. There is no reason why every children's hospital and clinic in the world could not also be a center for inclusion of all children by integrating within them a Montessori school. Montessorians need to take this call to action. Montessorians need to reconnect with the medical community. Only this way can the most severely disabled children experience inclusion, and only this way will our typical children realize the benefits of growing up in a community that is fully inclusive.

Answering the Question, Will You Take My Child?

What if your school is not connected to a children's medical clinic and hospital? Obviously, most Montessorians are teaching in

environments that are physically located in situations very different than the full-service inclusion Aktion Sonnenschein in Munich. This will change how you do inclusion and may place limits on the extent of inclusion you can offer, depending on the resources you have available in your school and community and the resources that you create through networking and collaboration with the medical community. A Montessorian who is sufficiently inspired can network and connect with enough resources to include most children with disabilities.

It is best when the parents discuss their child's challenges openly and actually ask this question of your school. More often than not, we say, "Yes, we will take your child" before we know the full extent of the child's medical and educational needs. Sometimes we enroll a child without being told by the parents that their child has special needs, and sometimes the parents do not realize or are in denial of the special needs of their child. Communicating with parents in these situations is more complex.

We will be in a better position to talk about and deal with questions about inclusion when:

- we know about the benefits of inclusion in a Montessori environment for children with different types of challenges,
- we know about the resources required to provide an educational and therapeutic experience for children with different types of challenges,
- we know how accessible the necessary resources are (availability, distance, time frame, cost),
- we know how much experience and commitment we have from the school administration and staff in accommodating children with different types of challenges,
- we know how supportive the family will be as a member of our resource team.

Answering the question, “Will you take my child?” then becomes an issue of will and resources. Do the educational and medical/therapeutic needs of a particular child match the availability of knowledge/resources in your school or is there the willingness/ability to acquire what is needed?

How to Begin Inclusion

1. Start with a strong Montessori foundation
2. Build a strong partnership with the family
3. Build a strong resource team of medical specialists
4. Train staff in Montessori-based special education techniques
5. Train medical specialists to give them a basic understanding of Montessori education and the functioning of a Montessori classroom
6. Network with other inclusion Montessori schools

Starting with an excellent Montessori foundation will greatly facilitate successful inclusion. AMI provides some additional guidelines for including students with special needs (Vaz 20-21).

AMI Basic Guidelines for Inclusive Montessori Education

1. Mix of children: General guideline is five children with disabilities per class of thirty.
2. Excellent assistants
3. Experience with typical children first: Teachers should also have three years teaching experience with typically developing children.
4. Open and caring attitude toward parents
5. Must have three-hour work period
6. Full 3-year cycle: The special child should begin by three years old and stay at least three years to gain full benefit

7. Complete environments, including lots of water activities
8. Music is mandatory! Every day music, movement, singing, line activities
9. Lots of spoken language activities
10. Expectations and encouragement
11. Help with focus and attention
12. Always encourage independence

Is perfect implementation of these guidelines enough for your children with special needs? It may be for some children. There is so much “special education” built into the Montessori method by virtue of its birth place that the method contains basic components of a variety of therapeutic methods: physical and occupational therapy, speech and language therapy, social skills training, daily living skills, and executive function coaching. Some mildly challenged children will thrive and succeed with no further assistance.

After saying “yes” to inclusion and following the AMI guidelines for inclusion, there are two critical dimensions to consider:

1. Are there still behaviors that are unsafe for child, peers, staff, or environment or that prevent the child from accessing or profiting from the Montessori curriculum or materials?
2. Is the child receiving the help they need to develop to their full potential?

Children with moderate to severe disabilities, or disabilities which present particular challenges not addressed by the standard Montessori method/materials, generally benefit from more support and interventions. When we say “yes” to inclusion, we are saying “yes” to much more than just including a child with a disability, it means also saying “yes” to supporting their particular individual needs—habilitation and rehabilitation—so that they can safely and successfully be included and can strive toward their fullest potential.

Behaviors that Can Lead to Exclusion

Children are excluded from Montessori environments primarily due to issues of safety of the child, the classmates, the staff, or the environment, or failure to thrive or make progress or function independently. Here are some common examples of behaviors that can result in exclusion of children from Montessori classrooms:

- Biting
- Hitting
- Spitting
- Kicking
- Yelling
- Running around and climbing on furniture
- Running away
- Biting/mouthing materials
- Throwing/dumping materials
- Toileting issues
- Lack of motivation, refusal to work/learn

These are barriers to inclusion when they are persistent behaviors. These behaviors often require the involvement of a multi-disciplinary resource team.

Other Barriers to Inclusion

- Inability to attend to a task or lesson
- Inability to communicate
- Lack of independence
- Obsessive/rigid/unpredictable behaviors that lead to tantrums or refusal to work

- Inability to receive developmental benefit from the Montessori environment/materials
- Parents who are unwilling to recognize that their child needs extra help and unwilling to provide additional support and/or services to their child that would help them be successful

Reducing Barriers to Inclusion

We can reduce barriers to inclusion in a Montessori environment through making changes that support the success of the child with disabilities. This requires a multi-faceted approach:

- Changes to the environment
- Changes to the method and materials
- Changes to the preparation of the teachers

In making inclusion decisions, we must consider that each child and their corresponding constellation of strengths and weaknesses is unique. For each disability diagnosis, there is a continuum of dysfunction from mild to severe/profound. There is also a continuum

The truth is that children develop and learn as a whole unit, with their whole bodies and personalities; the educational parts (cognition, learning, the mind) cannot be dissected from the medical parts (physiology, neurology, the body).

of levels of intervention; the level of intervention must be matched to the level required by a particular child.

Every school has a unique set of resources available to provide support to children with disabilities including quality, experience, and training of staff; access to medical specialists; and funds to purchase specialized materials and equipment.

There also must be a consideration of numbers and kinds of disability. Recommended inclusion percentages (number of students with disabilities per class) vary between 17 and 30 percent and not

more than one child with each disability type per class is considered best practice (recommendation by Dr. Theodor Hellbrügge, based on his observations of inclusive Montessori classrooms at Aktion Sonnenschein).

Variety of Inclusion

Inclusion is not one thing. Inclusion has a variety of forms and can take place in a variety of places. Inclusion is a spectrum from minimal to complete. The level of inclusion chosen for a child should be based on the greatest degree of inclusion and the most amount of time included that the child can profit from while still receiving the supports they need. Children should progress towards higher levels of inclusion as they are able.

These are some common forms of inclusion:

- Partial inclusion: the child spends part of the time in an inclusive classroom and part of the time in a resource room, self-contained classroom, or clinical/therapy setting.
- Full inclusion: the child spends all day in an inclusive classroom.
- Inclusion with support: the child has one-on-one support from a shadow/aid.
- Inclusion without support: the child is included with no dedicated adult assistance
- Pull-out services: the child receives services from specialists by being pulled out of the inclusion classroom to a resource room or therapy room.
- Push-in services: specialists come into the inclusive classroom to provide services to the child.
- Inclusion for socialization: for children with profound disabilities and whose educational needs are met in a self-contained classroom, they are included for social interaction with peers during lunch, recess, special classes, and/or special programs.

- Preparation for inclusion: the child is in an alternate setting to gain skills needed for successful inclusion.

Inclusion can take place in a variety of places:

- General education classroom: Montessori or traditional classroom with typical kids.
- Resource room: a separate room dedicated for meeting the needs of individual or small groups of children, such as the provision of special services/therapy.
- Self-contained classrooms within a regular school: Special education exclusive classrooms.
- Private clinic: the child receives individual or group services/therapies/skills to prepare for inclusion in a classroom.
- Hospital: the child receives services/therapies to prepare for inclusion in a classroom.
- Special Education School: the child receives specialized training/teaching/therapies with other children with disabilities in order to prepare for inclusion in a regular school, college, work-force, or participation in the community in general.
- Home-school: the child is included in the family and other inclusive family activities outside the home with parent support.

What kind of inclusion do you do?

- Full inclusion: All or nothing model, either included full-time or in an exclusion setting.
- Full inclusion with full support: inclusion full-time with a shadow/aid (an aid or shadow may be the most restrictive environment for a child).
- Full inclusion with push-in services

- Inclusion with pull-out services
- Inclusion with a resource room
- Inclusion with a Montessori resource room (resource room is outfitted with Montessori materials to be used therapeutically with child)
- Inclusion with medical specialist resource team
- Team approach to inclusion: Parent/teacher/specialists work together
- Inclusion in a Montessori environment that has been prepared/adapted/modified for the needs of the special children in it.
- Inclusion with a Montessori teacher who has been specially trained to modify the lessons and materials to meet the needs of the special children.

What drives your inclusion decisions?

Finances

- Cost of additional materials and equipment
- Cost of additional staff
- Cost of staff training
- Cost of medical service providers
- Cost of language therapists
- Cost of resource room

Access to Resources

- Are the resources needed available?
- Is trained/qualified/talented staff available?
- Is there the specialized training needed available?

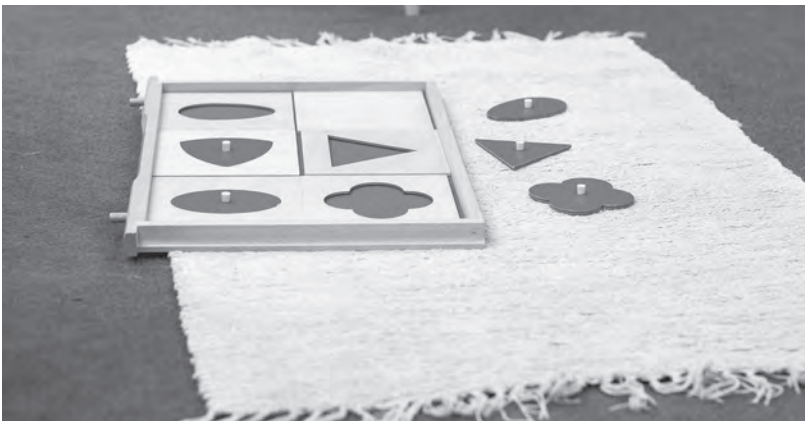
- Are medical service providers willing to work with you?
- Are language tutors/therapists available?
- Do you have room for setting up a resource room?
- Parent cooperation

Inclusion is a broad term with many pathways to its implementation. The goals of inclusion can be achieved in a variety of ways, and not all children are initially ready for inclusion in a classroom with typical children. Some children with significant challenges require preparation for being included in order to be successful, but that is also part of the inclusion process. We must remember that it is not enough to just include children with special needs, we must meet their needs for habilitation and rehabilitation so they can achieve their individual potential.

IS MONTESSORI RIGHT FOR MY CHILD?

Viewed as scientific and medical pedagogy, Montessori education is right for all children by virtue of its design. Montessori education has as its objective aiding the optimal development of children through encouraging the natural developmental processes and habilitating children with atypical developmental processes.

Parents are placing a growing number of children with challenges into Montessori schools, often with no more reason than an



Courtesy of Kerning Pair, LLC

intuitive feeling that it looks like a place where their child could be happy or could succeed. Often children are enrolled (included) in schools that are unprepared and untrained for children with particularly challenging behaviors, such as ADHD (attention deficit hyperactivity disorder) and ASD (autism spectrum disorders), and the inclusion is not successful. The fall-out from unprepared inclusion can be frustration; disappointment and disillusionment on the part of the family and the school staff; and, at its worst, it can be disastrous for a school, as in the cases of injury to children or staff, loss of teachers, loss of enrollment, or even lawsuits.

The Path to Medical Pedagogy

When an attempt to include a child fails, it is easy to conclude that Montessori education is not right for that particular child, or right for children with the disability of that child. However, this is an erroneous conclusion. Montessori education needs to incorporate medical pedagogy to meet the needs of children with disabilities. A partnership must be cultivated with the family; a multidisciplinary medical resource team must be created; teachers need specialized training and time for collaboration with the resource team; and specialized resources, materials of instruction, and equipment must be made available in the environment in order to prepare for inclusion. This is the path to medical pedagogy.

If anyone is able to succeed in educating the abnormal child, this would have to be based on scientific principles, as existing pedagogy is not sufficient. (*The 1946 London Lectures* Lecture 2)

The question, “Is Montessori right for my child?” also comes up when parents talk to medical professionals about educational placements for their child with dysfunctions, disabilities, or atypical development. Medical professionals, either through lack of understanding or misunderstanding of Montessori education, too often tell parents that a Montessori school is not the right placement for their child with a disability. They do not understand the close alignment of Montessori education with special education, nor the facility with which therapeutic interventions can be incorporated. It is necessary for Montessorians to inform and enlighten the medical community about Montessori education. Montessori education is

an educational paradigm born out of the medical sciences as it is doctor-designed education.

Building Medical Partnerships

Montessorians need to build partnerships with doctors and medical specialists in order to implement medical pedagogy to support inclusion of children with special needs. Montessori schools can build partnerships based on the needs of their particular children, or they can build a resource team to have a readily available medical specialists for current and future children they may include. If you wish to be proactive about inclusion and build a resource team immediately, then at a minimum you will want to find specialists in each of these categories: developmental pediatrician, occupational therapist (preferably specializing in pediatric OT and sensory integration), speech and language pathologist (specializing in children), pediatric neuropsychologist or child psychologist, behavior analyst (BCBA) and special educator (trained in multisensory instructional methods, such as Multisensory Structured Language Education).

A resource team can be mutually beneficial for your school and the specialists. Our specialists have provided staff training and parent education classes for our school community and recommended resources and strategies for our teachers, while we have enlightened our specialists about Montessori education and referred our specialists to our families. We make available the possibility for specialists to collaborate with school and families in a partnership that can yield optimal results. We provide a resource room for our specialists to work from and in which they can work with children, and we allow specialists access to our classrooms for observation of children and working with children. When the specialists can work closely with the teachers, and bring the “medical” back into the Montessori, then the result is an inclusive educational setting in which the child can function successfully and which is therapeutic (habilitative/rehabilitative).

Preparation for Inclusion

Is Montessori right for my child? The answer to this question must be based on the preparation of a class and school to include a child with particular challenges. If you are willing and able (with

resources available) to engage in medical pedagogy, as well as scientific pedagogy, then your class and school is right for that child. We must avoid including a child without providing the supports necessary for a successful outcome. When a child is not successful in a Montessori environment, this can be incredibly frustrating for everyone: The teachers feel inadequate and disempowered, the other children may feel troubled or insecure by the perceived failure of a peer, and the family may feel deceived by and disillusioned with Montessori education. If you find yourself with a child whose needs exceed your resources, be honest about this with the family and you may be able to work together to acquire the needed resources to allow the child to succeed. A positive byproduct of this teamwork may be building your school's capacity to help other children with similar challenges.

WILL MY CHILD RECEIVE THE NECESSARY SERVICES AT YOUR SCHOOL?

Before you can answer this question, you will need to know what kind of services the child will need. Both educational and medical services must be considered. This information needs to come from medical specialists who are trained in observing and evaluating children for challenges in the area of their specialization. Even if a school partners with specialists, parents may bring in specialists of their own that are covered by their medical insurance. Inclusion schools should plan to provide resources, arrange for space, and plan processes to facilitate team-building around providing appropriate supports for the child with special needs. Medical specialists should feel welcome and valued, and they should be given a brief orientation to your school and Montessori education in order to make their visit as successful as possible. It is best if you can offer classroom observations as well as a private resource room for their individual time with the child. (Make sure they give you a copy of their liability insurance.)

Evaluation: From Scientific Pedagogy to Medical Pedagogy

From *The 1946 London Lectures*, this is how Dr. Montessori defined scientific pedagogy:

Therefore the new method was called *Scientific Pedagogy*. The idea was: "Let us know the child first in order to educate him." The first problem was how to get to know the child.

Getting to know a child with challenges involves knowing the child from multiple perspectives: educational and medical perspectives. If we don't evaluate, we don't know what the child is struggling with. We don't know why the child cannot be successful and, therefore, what kind of aid is needed. The purpose of an evaluation is to try to get a diagnosis. With a diagnosis is a deeper medical understanding of the causes, characteristics, risks, deficits, and physiological or psychological dysfunctions. A good evaluation gives you a picture of the child's strengths and weaknesses. Even better is a differential diagnosis, which provides valuable insight into what types of educational and therapeutic supports are required in order to remove the child's barriers to development and learning.

The public school process of evaluation is generally very different than a private evaluation. Public school evaluations generally limit their scope to assessing only challenges that impact the child's ability to access the academic program at the child's peer group level, with no reference to optimal development nor challenges that can be classified as medical, not educational. The institutional framework in the United States is such that medical insurance companies can deny paying for anything that is educational or (until recently) habilitative; whereas, public school systems deny paying for anything that is medical. These myopic policies deny the child with a disability the services they need most. The truth is that children develop and learn as a whole unit, with their whole bodies and personalities; the educational parts (cognition, learning, the mind) cannot be dissected from the medical parts (physiology, neurology, the body).

In the broadened Montessori educational framework of scientific and medical pedagogy, education is seamlessly integrated with medical science. Implementing use of a multi-disciplinary medical resource team informs the teachers, the instruction, and the learning environment in a way that transforms the Montessori method into a diagnostic and therapeutic educational method designed to meet the needs of each individual child with a disability. This is medically enhanced Montessori education.

In a public school evaluation, only the academic strengths and weaknesses of the student are assessed and identified. The aca-

demographic weaknesses then become the goals on their Individualized Education Plan (IEP). The child's educational plan is focused on remediation of weaknesses. This may sound reasonable, but one hundred years ago, Montessori had a very different view of aiding a child's development, which was "to develop not his defects but his greatness."

Education is the help we must give to life so that it may develop in the greatness of its powers. To help those great forces which bring the child, inert at birth, unintelligent and unsympathetic, to the greatness of the adult being, this should be the plan of education—to see what help we can give.

Before we can give help, we must understand; we must follow the path from childhood to adulthood. If we can understand, we can help and this help must be the plan of our education: to help man to develop not his defects but his greatness. (*The 1946 London Lectures* 6)

The Montessori educational framework allows us to use the child's strengths to encourage and inspire overcoming deficits, dysfunctions, and disabilities. Children are free to follow their interests. By observing what attracts the child, the teacher and resource team can create therapeutic motives to entice the child to work that builds skills in the deficit areas. This is another dimension of knowing the child: knowing the personality of the child, knowing what inspires and what attracts the child.

In the introduction to her book, *Pedagogical Anthropology*, Dr. Montessori writes,

This is precisely the new development of pedagogy that goes under the name of *scientific*: in order to educate, it is essential to know those who are to be educated... we are following the path that leads to pedagogy, because we cannot educate anyone until we know him thoroughly.

...in the case of pedagogic anthropology there is equally a need of medical specialists, to whom the diagnosis and the treatment of abnormal pupils must be entrusted, as well as the hygiene of their development; but in addition to these, the teachers also are summoned to a vast task of observation, which, by its continuity, will supplement and complete the periodic observations of the physician. (17)

Answering the Question, Will My Child Receive the Necessary Services?

By following a scientific and medical pedagogy, your school can provide most of the services that are needed by the majority of children with disabilities. A Montessori school can proactively set up a medical resource team, provide training to their staff on typical and atypical development by different specialists, provide training to the resource team on Montessori education, procure resources and specialized training for staff, and set up a Montessori resource room. When a child with challenges comes to your school, create a partnership with the family and help them build a medical resource team to work with your staff to provide the services needed by their child. These services may be provided in a Montessori classroom, a Montessori resource room, in a private clinic, or in a combination of these environments.

HOW WILL YOU SUPPORT MY CHILD WHO HAS THESE CHALLENGES?

Dr. Montessori passionately describes her realization of the paradox of the special child:

At the time I was honored with a position which no other woman ever had in Italy—I was Assistant in the Clinic of Psychiatry and helped the professor to teach students in the examination of the insane...unlike the other doctors of the asylum, I was attracted by that colony of deficient children, not from a psychological standpoint, but morally.

One day, while I was in the asylum, in the children's ward, a newspaper dropped from my hands and, to my astonishment, I saw the little weaklings rushing to pick it up and tear it, each of them getting a piece. In doing so, it seems as though the little ones were overtaken by a great joy for such a conquest. Then a simple and yet deep thought came to my mind: "How little is needed to interest these poor unfortunates! They, more than the others, are in need of education and of intellectual help." This idea got a hold on my mind and remembering that half a century before, a French scientist, Edouard Leguier, had written a book on the education of the feeble-minded, I immediately went to the library of the asylum and devoured the contents of this book. After I had read the book, another idea came to me: "There was the possibility of educating the deficient! Why then was not this done?" And I found

the answer: Because neurotic and deficient children go to the domain of physicians, and physicians are out of the field of education.

I then grasped the idea that to fortify intelligence without education was a vain task, and this is why the deficient question in medicine was the most neglected of all. Between physicians and teachers, at that time, there was an absolute separation; they never met in their social and scientific work. (*The California Lectures of Maria Montessori* 259-260)

It is remarkable to consider if, ninety-nine years later, the situation has really changed for most children with disabilities. Today, the neuro-scientist can dissect and understand many things about the functioning or dysfunctioning of the human brain; but it is the teacher or therapist who execute the power to construct and who hold the power to habilitate or rehabilitate a child. This is not done by just any teacher, it has to be the kind of teacher envisioned by Maria Montessori: a scientific/medical pedagogue, a teacher informed by medical science who develops the necessary aids to the optimal development of a special child.

**SCIENTIFIC AND MEDICAL PEDAGOGY:
THERE IS STILL MUCH WORK TO BE DONE**

But why has the teacher who occupies himself with the finest part of the child, less dignity than the doctor? In this time, would it not be logical to put the teacher in the place of the doctor and remove the doctor altogether. This makes me think that whereas the doctor has touched the truth, it has not been touched by the teacher. If in fact the teacher had touched the truth, to what height might he not have attained? If instead he is, as we have said, lower than the doctor, this shows that the teacher follows an ideal but has not realized it and that between his ideal and its realization there is still much work to be done. (*The California Lectures of Maria Montessori* 9-10)

Aiding the development of children with disabilities, or atypical developmental paths, falls along a seam that joins the disciplines of education/pedagogy and the medical sciences. Dr. Montessori envisioned a collaboration between medical professionals and educators that would create a bridge between science and peda-

gogy. This represents a multidisciplinary approach where scientific insight from medical specialists, such as speech and language pathologists, occupational therapists, physical therapists, pediatric neurologists and neuropsychologists, psychologists, and behavior analysts can illuminate barriers to learning and assist educators in understanding and providing developmental aid to their students with disabilities.

The pioneering works of Dr. Theodor Hellbrügge, The Shelton School & Evaluation Center, The Lane Montessori School for Autism, Indianapolis Public Montessori Schools, and Montessori-based dementia programs are all beautiful examples of experimentally



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applied scientific and medical pedagogy. Through these programs, a template has been revealed for following the child with a disability and is consistent with scientific knowledge and best medical practices within a Montessori educational framework. This medically enhanced Montessori method becomes a therapeutic and diagnostic aid to development. Adaptations, modifications, reductions, extensions and supplementations to the method, materials and environments that are specifically tailored to the particular disability characteristics and needs of a child are made to allow access to the Montessori curriculum. The child can gain independence, integrate socially, and develop areas of strength as well as weakness.

The medical science is in place to provide the keys to development and advancement and success for children with even the most severe disabilities. As teachers, and especially as Montessorians, we need to reconnect with the medical community. We need to reach out to the pediatricians, the occupational therapists, speech pathologists, child psychiatrists and psychologists, special educators, and behavior specialists. We need to enlighten them about the gift of Montessori to the holistic education of children, and we need to inform ourselves of the tools and techniques that can benefit our children with disabilities and challenges.

Montessori schools world-wide are experiencing a growing number of children with disabilities for whom auto-education within a Montessori environment does not naturally take place. These children, whom nature seems to have abandoned, can be helped to access and benefit from the Montessori curriculum using an approach based in the principles of scientific and medical pedagogy.

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