

What Should School Be For?

Written by Maren Schmidt

Highlights from Dr. Steven Hughes MINW Talk

Dr. Steven Hughes, a pediatric neuropsychologist at the University of Minnesota and a parent to an eleven-year old Montessori student, spoke to a full house on September 23, 2008 at the Oregon Health and Sciences Auditorium. In his talk, entitled Good at Doing Things: Montessori Education and the Higher-order Cognitive Functions, Hughes posed the question--What should school be for?

What Students Want

Hughes turned to the research of his associate and mentor, Dr. John Raven, to highlight the following ten outcomes that students wanted from school:

- To leave school confident and able to take initiative
- To be independent
- To develop character and personality strengths
- To hear about career and educational opportunities from experts
- To apply knowledge to solve problems
- To be able to express oneself effectively
- To be able to put forth ones' own opinion
- To know about different types of jobs and careers
- To be encouraged to express opinions
- To understand the implications and responsibilities of marriage

Teacher Wishes

What do teachers want to teach? Raven found the following desires among teachers:

- Help students develop their characters and personalities
- Encourage students to be independent
- Make sure students can read and study on their own
- Encourage students to have a sense of duty toward their community
- Ensure that all pupils can speak well and put what they want to say into words easily
- Encourage students to have opinions of their own
- Help student be considerate of others
- Help students contemplate what they really want to achieve in life
- Make sure students can express themselves clearly in writing
- Teach about what is right and wrong

The Reality

What gets taught? Raven's studies showed the following educational goals get the most attention:

- Help students do as well as they can on standardized tests
- Help them develop a considerate attitude toward other people
- Make sure they enjoy the lesson
- Encourage them to have opinions of their own
- Encourage them to have a sense of duty toward the community
- Make sure they are able to read and study on their own
- Teach them about what is right and wrong
- Ensure they can express themselves clearly in writing
- Ensure they can speak well and put what they want to say into words easily
- Encourage them to be independent and stand on their own two feet

Hughes commented that Raven's study has been duplicated all over the world with the same results, finding that teachers and students' desires, actions and outcomes are in conflict.

Montessori Approach Assists Students and Teachers

What makes Montessori education different? Hughes said that Montessori education allows the experimental interactions of a child with his or her environment. It is the experimental interaction with our environment that promotes healthy brain development. Experimental interaction gives a child the ability to achieve self-confidence, independence, the development of character and personality strengths, problem solving skills, self-expression, opinion formulation and more. The work in a Montessori classroom aligns the goals and outcomes of both students and teachers.

Good at Doing Things

Hughes discovered Montessori education when he asked his friend, Deborah Sussex, who had extensive experience working with older children and teens at Camp Widjiwagan in northern Minnesota, where the best kids in the area came from. Her answer was, "Lake Country Montessori School." Sussex said that the kids at the Montessori school could figure out what needed to be done, do it well, and embellish on the task.

Other adolescents, she said, had to be asked to do something more than once, reminded, and held accountable. But if you asked the students from Lake Country to set the table, they would do it, and embellish the work by adding flower arrangements. Montessori students, she found, were good at doing things. That was the difference.

Pediatric Neuropsychologist as Parent

Hughes learned more about Montessori education as he watched the process in action with his daughter. Observing his daughter he began to understand the power that Montessori education had on positive brain development. "Montessori education is the embodiment of all I learned in my

PhD in pediatric neuropsychology," Hughes told the audience. "It's like education designed by a gifted pediatric neuropsychologist."

Hughes commented that 75% of his peers in pediatric neuropsychology have children who attend or have attended Montessori schools. Neuropsychologists see that Montessori environments push the edge of learning for children, keeping the brain challenged, and thus growing. The child's hands-on experimental interactions within a Montessori environment aid optimal brain development. "What should schools be for?" Hughes asked again. They should be about building better brains."

Building Better Brains: A Montessori Strength

How do we build better brains in Montessori environments? Hughes said the strengths of a Montessori classroom included the child's opportunities for repetition of activities, the psychological safety and security of a classroom, the caring for living things, the multitude of activities that use the hand of the child to reinforce learning, the creation of a cycle of choosing, doing, and learning, the multi-sensory materials available, the child's self-guided learning, and the exploration of the out of doors.

Hughes explained how the brain is especially wired to accept sensory information from the hand and showed a humorous picture depicting brain development being dominated by input from the hand. The brain looked like it was all hands, bringing home the point that the hands-on learning that occurs in a Montessori classroom is perfect for children's brain development.

Hughes stated that all meaningful work needs error analysis, and that a strength of a Montessori classroom is that the child is free to make a mistake and learn from that failure. It is with the child's analysis of error that creates the development of executive function in the child. "Nothing is as good as Montessori education for the development of executive function," Hughes said.

The Process of Normalization Aids Executive Function

The prefrontal cortex in the brain controls executive function. The prefrontal cortex serves to help us link present to future, develop impulse control, and to modify events remote in time and space. It is this part of the brain that allows us to plan, imagine, organize, create self-awareness, self correct, choose strategies, and make critical judgments.

The child's work in a Montessori environment fosters the executive functions of the brain. The outward manifestations of the child's internal brain growth are shown in the child's observable behavior. Certain behaviors indicate that optimum development is occurring within the child, a process that Montessori called "normalization." Normalization is characterized by the young child's love of order, love of work or meaningful activity, love of silence and working alone, attachment to reality, spontaneous concentration, obedience, independence and initiative, and joy.

Children who exhibit these behaviors seen in normalization are also good at doing things. For those concerned about academic development more than

being good at doing things, Hughes provided some statistical information.

Montessori Research Shows Academic Achievement

Hughes cited Dr. Angeline Lillard's research at Craig Montessori in Milwaukee that showed that by the end of kindergarten Montessori students performed better than their peers at executive control, decoding language and early math, social awareness, and appeals to social justice. By sixth grade Montessori students outperformed their peers in social skills, exhibiting a sense of community, creativity in story writing, and complexity of sentence formulation.

The East Dallas Community School, a public Montessori started in 1978 in Dallas, Texas serving children from birth to third grade, had the following results:

- In 2002, 78 percent of third graders applied to go to gifted and talented programs and were accepted
- 99 percent of students obtained GED's or equivalent
- 88 percent went to college when only 50 percent of Dallas public school students go to college.

Montessori Culture, Methods and Materials are Singular Strengths

Hughes final point was that Montessori differs in contrast to other theories of education in that Montessori culture, method and materials are well established. Hughes gave the example of John Dewey's ideas. Dewey believed that students should be involved in real-life tasks and challenges, an idea that Montessori practitioners also endorse. Dewey's philosophy in comparison to Montessori education has not been enriched and developed by a vibrant learning culture supported by methods and materials.

Educational culture is the most important part of Montessori education as it contains a view of humanity that is transformational, and the core values of Montessori education create civilization.

Our Earth Needs People Who are Good at Doing Things

As Hughes showed a picture of our Earth from space, he said we must we realize that no one is going to come and save us. We are it.

Montessori education can help our children become people who can solve the problems of our planet, people who can look around, figure out what needs to be done, and do it.

Montessori kids are good at doing things. That's what Montessori schools are for. That's what our world needs.

Visit Steven Hughes' website, www.goodatdoingthings.com and Angeline Lillard's website, www.montessori-science.org. Dr. Raven's research is at www.johnraven.co.uk.

About Maren Schmidt: Maren Schmidt is an AMI trained elementary guide and currently writes the award winning newspaper columns, Kids Talk. Visit KidsTalkNews.com.

Maren is the author of two books, *Understanding Montessori: A Guide for Parents*, and *Building Cathedrals Not Walls*.

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