

University of Washington launches project to discover fundamentals of early learning

May 24 2010

The University of Washington Institute for Learning & Brain Sciences (I-LABS) announced today the launch of a multi-year, multimillion-dollar initiative to foster new brain research discoveries and insights into how and when children learn. Washington State Governor Christine Gregoire, University of Washington President Mark Emmert and I-LABS co-directors Dr. Patricia Kuhl and Dr. Andrew Meltzoff officially opened the new \$7 million I-LABS MEG Brain Imaging Center on the University of Washington campus, hosting the first brain imaging device in the world optimized for neuroscientific study in infants and young children.

"The University of Washington I-LABS continues to be a global leader in the science of child development," said Gov. Chris Gregoire. "The potential for the MEG center is incredible. It will help us look inside the minds of our youngest learners and better understand just what happens during those earliest years, so we can best support kids in growing up ready to learn and succeed."

By enabling new scientific discoveries in early learning and brain development, crafting actionable recommendations based on those results, and helping to educate policymakers, teachers and parents, I-LABS will accelerate the cycle from discovery to practice in early learning. I-LABS' activities are expected to boost the growing national awareness of the value of early-learning investments and of the impact that changes in pre-school and child support services can have on school readiness and lifelong learning.

The Developing Mind Project marries the expertise and vision of a world-class research team led by Professors Kuhl and Meltzoff with new brain-imaging technology. With the world's first brain-imaging facility focused on children as they think, feel, act, and listen to languages, I-LABS will use innovative techniques to provide a view into the youngest of brains and a glimpse into the origins of learning. The discoveries will be shared with the academic, early learning, and medical communities so that environments may be designed to maximize learning, taking into account individual differences.

"Behavioral science discoveries have shown that early learning experiences set the foundation for success in school and in life," said Meltzoff, co-director of the Institute." The Developing Mind Project will allow us to combine the science and practice of learning to ensure that all children achieve their full potential as lifelong learners."

The \$7 million I-LABS Meg Brain Imaging Center was financed by generous gifts from the Nick and Leslie Hanauer Foundation, the Washington State Life Sciences Discovery Fund, and generous contributions from the University of Washington and philanthropists in the Pacific Northwest. There are few MEG machines in the United States and, in collaboration with scientists at Elekta Neuromag in Helsinki (MEG manufacturer), the UW scientists have achieved what no other laboratory in the world has done. They have customized the scientific designs for babies and developed MEG measures that allow testing of infants and young children as they listen to people talk and act naturally with people and things in their environment. The one-ton machine operates silently and can spatially and temporally map the mental activity of an infant only a few days old, providing important data into how, where and when human learning happens. "MEG is the only whole-brain imaging technology that can be used at all ages to examine learning over a lifetime. Over the next decade it will provide a very powerful tool for exploring the human mind and how people learn," said

Kuhl, co-director of I-LABS.

"I-LABS research is critical both for new discoveries about human learning and for improving the early diagnosis of children with medical syndromes such as autism," said Lee Huntsman, Executive Director, Washington State Life Sciences Discovery Fund. "The MEG Brain Imaging Center will dramatically expand this scientific horizon, cement Washington's leadership in the field and benefit all our community's children." Studies have shown that every \$1 spent in early learning saves \$7-14 in remedial and penal expenditures. I-LABS' research will identify evidenced-based practices that will help the State invest wisely in early learning.

Provided by University of Washington

Citation: University of Washington launches project to discover fundamentals of early learning (2010, May 24) retrieved 23 April 2024 from <https://medicalxpress.com/news/2010-05-university-washington-fundamentals-early.html>

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