



# A YARDSTICK



Left: Wendy Coster, professor and chair of the Department of Occupational Therapy at BU Sargent College. Above: Professor Coster's research is primarily with pediatric measures; parents are asked to fill out inventories to help Coster gather her research; Coster at a focus group with the parents of children with disabilities.

## Wendy Coster

Wendy Coster knows the value of a yardstick. In 1992, she helped revolutionize the world of occupational and physical therapy with what is considered the gold standard for measuring how well children with disabilities or impairments perform daily life skills, and she has soared from there.

Coster, who chairs the Department of Occupational Therapy, saw the need in the 1980s for good instruments to measure performance of critical activities of daily living, ones that would produce consistent scores no matter who interviewed the parents or whether that child was having a bad day. But when Coster teamed up with physical therapist Steve Haley, now at the School of Public Health, there was a "Catch-22" operating in grant funding.

leveled against previous assessments.

"We don't ask what method they use to get their shirt on or tie a shoe, we just ask, whatever method they use, can they get it done?" said Coster.

After the PEDI was published, it quickly became not only nationally recognized, it was translated into 10 languages, including Chinese and Hebrew. It is now the standard for research and clinical practice, providing a measure of functional progress and guiding therapies ranging from pharmaceutical to behavioral.

"Once the measure was available, I could see how it changed the field," she said. "It really did make a difference."

Coster has made such a difference not only with the PEDI but with her entire body of work that she was awarded the 2008 Eleanor Clarke Slagle Lectureship, the profession's highest academic honor and also the highest honor given by the American Occupational Therapy Association.

assessment in 1998 after three rounds of data collection.

The School Function Assessment also has been acclaimed internationally, translated into Icelandic, Chinese, and Hebrew, and is used for research in Israel.

Coster's next undertaking is to develop a measure to describe the participation of children and youth with diverse disabilities—including physical and learning disabilities, autism, and behavioral disorders—in important community and home activities. The goal is to create an instrument that can capture the extent to which children with disabilities are engaged in culturally meaningful activities and events such as family meals, religious services, community outings, and organized groups such as the Boy Scouts, which is more challenging than the clear-cut tasks measured in the PEDI. A parallel scale will measure factors that facilitate or create barriers to participation. The three-year project is supported by a grant

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"Everyone wanted you to use good measures if you were going to run a clinical research trial, but they didn't want to give you any money to develop the measures," said Coster, a professor of occupational

therapy. "They just didn't get it."

At that time, whether a child was developmentally disabled or suffered an injury or illness, there was no way to measure how well he or she performed basic life skills such as dressing, teeth-brushing, getting to school, or eating family meals. The only yardsticks were IQ tests, which measure cognitive skills but not whether a child could process an instruction.

A major achievement of the Pediatric Evaluation of Disability Inventory (PEDI) is the way it is calibrated to show small increments of progress. It also does not limit the method a child uses to accomplish a task, a criticism that the disability community had

Dr. Coster's work is credited for its creative contribution to the profession's body of knowledge. "Dr. Coster is an exemplary faculty member and tremendous asset to Boston University Sargent College," said Gloria Waters, dean of Boston University College of Health & Rehabilitation Sciences: Sargent College. "She is truly a gifted teacher, researcher, and administrator."

From the PEDI, Coster went on to develop another groundbreaking instrument, the School Function Assessment, which measures how well a student with a disability manages in a school environment, from getting in and out of a chair to interacting with peers. The instrument works like a detective for obstacles to success. For instance, if a student with mobility problems cannot arrive at art class until the rest of the class is launched on the project, this student may have limited time to complete it, resulting in not only performing poorly in art but in frustrations that might cascade to other areas. Without proper detection and intervention, larger problems might develop.

"It could start with a mobility problem but it becomes a much larger problem," said Coster, who published her research on the

from the National Institute on Disability and Rehabilitation Research.

"If it weren't challenging, it probably wouldn't be interesting," Coster said. "You have to define what you're asking clearly enough to get decent data that are also clinically useful."

Meanwhile, Coster and Haley have another grant to revise and refine the PEDI, which comes in a current climate of greater support in the funding world for ways to standardize measures of function—the National Institutes of Health has been increasingly inclined to spend money on projects to ensure research results can be compared, Coster said. Now, grant providers see the wisdom of developing yardsticks.

As she refines the PEDI, Coster sees how far her research and the field have come. "I wish I'd known then what I know now," she said. "But as we learn more, we'll get better and better at designing the measures for what we really want to know."