

Translated from Spanish by Andrea Andrade

Marina Umaschi Bers: studies the impact of new technologies on child development.

An Important Award Goes to an Argentinean Woman

She has just received the highest award granted by the North American government to young scientists.

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Twelve years ago, when Marina Umaschi Bers left her home in La Plata, Argentina to study in the United States - with Seymour Papert, Sherry Turkle, and other important figures who were beginning to analyze the relationship between children and new technologies – she would never have imagined that which happened on the last Thursday of July: she received, from President George Bush himself, the highest award granted by the North American government to outstanding young scientists and engineers, the 2005 Presidential Early Career Award for Scientists and Engineers, an award granted to a select group of twelve young researchers.

“This award is, for me, a recognition of four different things,” she said in this occasion, “that woman can do good science; that woman can be spouses and mother of three little kids and still do good science; that Latin American immigrants to this country can make a career and contribute to their own discipline and society...even though our accent may never go away; that none of the above can’t be done alone...but with the help and support of many wonderful mentors, colleagues, students, friends and...of course...family.”

Daughter of professor and judge Héctor Umaschi, Marina was one of the first students enrolled in the Department of Communication Sciences at the Buenos Aires University, where, while helping Alejandro Piscitelli, she became interested in the complexities of human and computer interactions.

“At 21, I worked in the mornings for the magazine Uno Mismo and studied at night at the Buenos Aires University,” Marina recounts from her home in Arlington where she resides with her husband and three children ages six, three and a half, and a year and a half. “During that time, I had interviewed Papert via email and he fascinated me.”

With the goal of studying with the pioneers at the Media Lab, Umaschi Bers first completed her Masters degree at Boston University and acquired the technical skills needed for acceptance at the Massachusetts Institute of Technology (MIT).

“It was a lot of effort. I knew little about programming,” Bers recalls. “I knew the theory of artificial intelligence, but not of its practice. In reality, I didn’t know anything...On the other hand, my English was not too good, but I did know how to think critically and that is what they teach you at the Buenos Aires University. At MIT no one would sit down with you to teach you, it was very competitive. The first two years were very difficult; after, I met my husband and he helped me a lot.”

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After her doctorates at MIT, Umaschi Bers went on to investigate how virtual worlds can help promote the health of hospitalized children.

“First, I created a language for children to program a robotic stuffed animal and, while I was working one summer in Mitsubishi, they had me use it with kids who were to go for heart transplants,” she tells. “For my thesis, I developed a virtual world called Zora, where many kids can connect to create a virtual city. We implemented Zora at the Boston Hospital for patients who had to undergo dialysis and lay for twelve hours without being able to speak to others in the same room.”

Zora is a three-dimensional virtual world that offers children the tools to create, chat, navigate and live in a mapped virtual city, and populate these cities with personal artifacts, rooms, and stories. Children can create characters to represent themselves and develop their profiles which correspond to their heroes and villains, values, and biographies. Various users can interact and communicate in real time via a chat system.

Now at Tufts University and with a five year grant from the National Science Foundation, Umaschi Bers and her students at Developmental Technologies are researching whether these “identity construction environments” can help these young patients with their personal and social development, as well as with their adherence to treatment and ability to manage strategies for coping.

Umaschi Bers says, “I am interested in studying what children can do with machines, more from the point of view of context, anthropology, and technology. Many things function in the laboratory, but not when you take them into the school setting. This is because context is very powerful. For example, if the nurses felt that Zora would interfere with medical routine, they would not have used it. It had to integrate with the hospital.”

Bers concludes, “Those who criticize computers are users who are unsophisticated with technology. Just as a parent would sit with his child to read a story, he would also have to sit with him to use the computer, not to learn through programs of instant gratification – like computer games, but through those with more stimulating challenges. The problem is not with technology, but with the society.”

Written by Nora Bär