LA NACIÓN

Israeli-born scientist presents a lecture:

Computer Usage Changes How Our Brains Operate

✮ High exposure to multimedia technology has already affected how we think.

✮ Media technology and education expert Dr. Idit Harel Caperton calls for upgrading computer technology in schools in order to adapt to this new reality.

Idit Harel Caperton seeks to understand how changes in thinking generated by the use of computers and Internet can improve education.

The intensive use of computers and the Internet is changing the structure and operation of the human brain in ways that are unprecedented.

Neural connections in the brain are working harder than ever to accelerate learning and to drive fast-paced creativity. As a result, human beings are evolving toward new ways of creating, feeling and interacting with the world around us.

That is what Idit Harel Caperton, an Israeli-born scholar with a Doctorate in Learning Research from the Massachusetts Institute of Technology, a Master's degree in Technology in Education from the Harvard Graduate School of Education, and a Bachelor of Arts degree in Psychology and Philosophy from the University of Tel-Aviv Israel told *La Nacion*.

"People no longer think or learn as we did twenty or thirty years ago. We have gone from passively watching television or quietly reading a textbook to active creation and interactive design of multimedia content, based on our interests, for the purpose of sharing this material with whomever we want. As a result, our brains have become more intuitive and better adapted to creative multitasking," added the learning and cognition specialist, who gave a lecture yesterday at the Omar Dengo Foundation in San Jose.

The researcher then goes on to stress that "our mental processes—of learning and thinking—have evolved, and it is urgent to apply new educational strategies that accommodate this new reality."

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Muy claro

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Idit Harel Caperton
Científica israelí

"The access and knowledge to create multimedia content is not a luxury but a necessity. Having a computer is as basic today as food."

Today almost no one is capable of thinking exclusively of one thing at a time; multitasking is the norm. For an average person to feel attracted to a topic, simultaneous exposure to the text, moving imagery, and sound is required. "No one settles for less," declared the President of the World Wide Workshop Foundation, which promotes the development of free access to educational technology for all children and educators.

For example, young people and an increasing number of adults are beginning to use electronic logs or blogs (interactive journals) and wikis (websites that can be edited by multiple people) through the Internet. This social creation of collaborative content is known as Web 2.0. This field includes virtual communities like Wikipedia, Facebook, MySpace, and Hi5.

"Based on their daily interactions with these sites, young people develop brains capable of performing in uniquely new, creative and imaginative modes. This is a new generation of multitaskers, who don't just read but also contribute, and their activities indicate higher levels of human interaction with media," says Harel Caperton.

"New alternative technologies are changing social, technological, educational and political scenarios. Even political leaders appreciate this new interactive way of thinking and they are implementing it to design and promote their political campaigns," stated the former member of the MIT Media Lab.

Any Misgivings? "Everything has its pros and cons. For me, a cause for big fear is those people—young and old—who have remained on the sidelines, neglecting to prepare themselves for this creative multimedia world that we now live in. This is what I'm concerned about," she says.

"The people who will be at the forefront of the next generation will be those who have a combination of social and intelligent media technology skills. I call for preparing youth for the open and global knowledge economy, and that is what we are interested in fueling in my foundation," Idit Harel Caperton stresses.

For Caperton, who also champions the global initiative One Laptop Per Child (OLPC), it is no longer just about having computers in order to superficially surf cyberspace on the web. "It is about learners, especially young learners, developing these new capacities beyond merely using Internet for information, but rather for constructing for themselves new modes of knowing and practicing social construction of knowledge. Using laptops fluently from a young age is imperative to building new capacities and skill sets, not just the accumulation of facts," she declared.

To do that, she talks about six new skill areas that our education system must teach now: the ability to generate and simulate original ideas with digital media and web games; the ability to coordinate the production of collaborative content on a network; the talent to produce and distribute multimedia projects effectively online, and the knack of exploring and deploying information resources in order to promote social learning and knowledge exchanges online.

"Far from diminishing our capacity for concentration, reflection and contemplation, the new media technology enriches our human connection to knowledge and to each other, and even allows us—everyone who has these new contemporary abilities—to initiate innovative movements for science education or for health in Africa from an office located in New York," Idit Harel Caperton concluded.