



Use of Technology Before Age Five Can Affect Cognitive Development: IPN Specialist

- Exposure to mobile devices may lead to attention and concentration deficits, delayed language development, and reduced frustration tolerance, according to clinical psychologist María del Pilar Cortés Ramírez.
- Physical and sensory exploration—such as crawling and climbing—is key to fostering tolerance and emotional regulation in children.

Excessive stimulation from electronic devices such as smartphones and tablets in children under five can hinder cognitive development by causing attention deficits, delayed language acquisition, and lower frustration tolerance. For this reason, children should not be exposed to such stimuli, explained María del Pilar Cortés Ramírez, clinical psychology expert at the Instituto Politécnico Nacional (IPN).

The professor at the Escuela Superior de Medicina (ESM) emphasized that early childhood is when the brain's foundational structure is formed—one that will support the individual throughout life. Exposure to digital stimuli, she said, can disrupt this natural process, which ideally occurs through interaction with the real environment and the formation of emotional bonds with parents and family.

This perspective aligns with the Pacto por la Primera Infancia promoted by President Claudia Sheinbaum Pardo and supported by Secretary of Public Education Mario Delgado Carrillo, which underscores the need to protect and nurture early childhood development as the foundation for transforming the nation.

Cortés Ramírez stressed that exploration is essential to cognitive growth. When replaced by digital devices, children lose their natural drive to discover their surroundings, which in turn hampers their ability to adapt, form social relationships, and develop empathy.

She noted that mobile devices offer instant gratification, which can lead to low frustration tolerance, irritability, and reduced neural plasticity—the brain's ability to form connections that enable learning and skill development.



"When a child receives immediate rewards, their brain adapts to that pattern. If not properly regulated, they may develop a more impulsive and less rational personality, driven by the need for instant results," she explained.

The IPN specialist added that play-based activities—such as crawling, climbing, and sensory exploration—are fundamental for developing tolerance, emotional balance, and adherence to social norms.

While discouraging screen exposure for children under five, Cortés Ramírez acknowledged that technology can later serve as a didactic tool if used under supervision.

"It's not about demonizing technology—it's part of everyday life. For children over five, it can enrich learning, as long as screen time is limited and the content is appropriate. Without clear boundaries, however, children may end up preferring virtual interaction over creative or physical activities," she cautioned.

The professor emphasized that emotional, social, and physical development in early childhood has a direct impact on long-term growth and the adult each child becomes.

Given that the first five years are crucial for shaping brain architecture, she urged parents to provide direct, responsive stimulation and to build strong emotional bonds that support a healthy, well-rounded development.

For more information, visit www.ipn.mx.

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