



Is Technology Reshaping the Developing Brain?

Summary of Clemente-Suárez et al. (2024)

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Academic Insights

This review synthesizes over 150 studies to examine how digital device usage influences children's cognitive development, including attention, memory, and executive function. The findings highlight a dual effect: interactive and educational technologies can support cognitive growth, while excessive or passive use may contribute to cognitive overload, reduced attention, and weaker social skills.

A central concept is the displacement hypothesis, suggesting that the impact of screen time depends largely on what it replaces—such as physical play, social interaction, and exploratory learning, which are essential for brain development.

Outcomes are shaped by content, engagement level, and supervision, underscoring the need for balanced and intentional use rather than simple restriction.

Apply This Now

When digital tools are required, select those that require active engagement, such as problem-solving or decision-making tasks..

Add This

Ensure regular “offline development time” for play, movement, and social interaction.

Avoid This Mistake

Avoid relying on screens as default behavioral management tools, as this may limit self-regulation development.

Keywords

cognitive development, executive function, digital devices, brain plasticity, learning

Reference

Clemente-Suárez, V. J., et al. (2024). Digital device usage and childhood cognitive development: Exploring effects on cognitive abilities. *Children*, 11(11), 1299.

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