

# Modernization Affects Children's Cognitive Development

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(PhysOrg.com) -- Childhood is changing rapidly around the world, and the forces of modernization have a significant impact on shaping the intellectual development of children, researchers at the University of California, Riverside and Pitzer College have found.

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In a study published in the November/December issue of the journal *Child Development*, researchers Mary Gauvain of UCR and Robert Munroe of Pitzer College used previously collected data from the late 1970s to study approximately 200 children ages 3 to 9 in Belize, Kenya, Nepal and American Samoa. The researchers examined how cultural changes associated with modern development - such as the availability of writing tablets and books, electricity, a home-based water supply, a radio and TV set, and a motor vehicle - were related to [cognitive development](#).

The study, “Contributions of Societal Modernity to Cognitive Development: A Comparison of Four Cultures,” found that children who lived in households with more of these modern amenities performed better on tests measuring certain types of cognitive function, engaged in more complex play activities and performed less work related to subsistence, household chores and infant care. This was true in all four communities studied, Gauvain and Munroe wrote.

“Changes in a culture resulting from the introduction and widespread use of modernizing elements alter the way that people communicate with one another, the activities in which people engage, and how people organize their time,” said Gauvain, professor of psychology. “This research demonstrates that these types of changes have an effect on the [cognitive skills](#) that children develop. The findings suggest that the rapid cultural changes occurring in the U.S. today that have modified children’s everyday experiences have consequences not only for how children spend their time but also the thinking skills that children develop.”

Increased urbanization, massive shifts in economic, political, and social conditions, and changes in how we communicate have a significant impact on children’s everyday lives, she said. “Better understanding of how [intellectual development](#) is shaped and directed by the forces of modernization can give us insights into the psychological consequences of globalization,” she explained.

Gauvain said she and Munroe examined children from 3 to 9 to explore the shift in cognitive performance and social responsibility that occurs in most children between ages 5 and 7, regardless of where they live. They also explored the role of the Flynn effect, which asserts that there’s been a rise in performance on certain parts of IQ tests over the past several generations due to modernization. This study showed that such changes reflect the presence of certain modern resources, the researchers said.

“Modernization typically includes shifts in the production and distribution of resources, increased engagement in commerce, and the availability of various forms of technology that affect how people satisfy basic needs, regulate health and well-being, and communicate with and learn about the world outside the community,” the researchers wrote. “Efforts both to preserve and reorganize a culture undergoing modernization are manifested at the individual level and occur in the

home, workplace, and other settings. These changes affect, on a daily basis, the work people do, the way children are cared for and educated, and the nature and strength of the links between the community and the world beyond the community. Thus, both inside and outside the home children are exposed to changing modes of acting and interacting and, as a result, modernization has direct relevance to processes of human development, including cognitive growth.”

Provided by University of California, Riverside

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