

Poor planning skills found to contribute to income-achievement gap

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Children from low-income families tend to do worse at school than their better-off peers. Now a new study of a large ethnically and socioeconomically diverse group of children from across the United States has identified poor planning skills as one reason for the income-achievement gap, which can emerge as early as kindergarten and continue through high school.

The study, by researchers at Cornell University, appears in the journal *Child Development*.

"Low-income [children](#) appear to have more difficulty accomplishing planning tasks efficiently, and this, in turn, partially explains the income-[achievement gap](#)," according to Gary Evans, Elizabeth Lee Vincent Professor of Human Ecology at Cornell University, one of the study's researchers. "Efforts to enhance the [academic performance](#) of low-income children need to consider multiple aspects of their development, including the ability to plan in a goal-oriented manner."

Researchers used data from the Eunice Kennedy Shriver National Institute of Child Health and Human Development Study of Early Child Care and Youth Development, which looked at almost 1,500 children from 10 geographic sites across the United States.

Planning skills were assessed when the children were in third grade, through the widely used Tower of Hanoi game. The Tower of Hanoi starts with a stack of rings placed on a rod so that the biggest ring is at

the bottom and the smallest is on the top. Using two other rods and moving only one ring at a time without ever placing a wider ring on a smaller ring, the children have to recreate the original stack on one of the two spare rods.

The study found that the children's performance in fifth grade could be explained, in part, by how they did on the third grade planning task, even when taking IQ into consideration. Using income as well as math and [reading scores](#), the study also found that the lower the [household income](#) during infancy, the worse the children's performance on reading and math in fifth grade—replicating the well-known gap between income and achievement.

The researchers suggest several reasons why poverty may interfere with the development of good planning skills. Individuals living in low-income homes experience greater chaos in their daily lives, including more moves, school changes, family turmoil, and crowded and noisy environments, and fewer structured routines and rituals. In addition, low-income parents may be less successful at planning because of their own stress levels.

Researchers believe the group of skills called executive function, which includes planning skills, can be strengthened through interventions. Such interventions are being developed and tested for children as young as the preschool years.

Provided by Society for Research in Child Development

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