

Children's division of cognitive labor: Evidence from Kenya and China

Colin Jacobs

UC Berkeley, Berkeley, California, United States

Dhara Yu

University of California, Berkeley, Berkeley, California, United States

Zhen Zhang

Chinese Academy of Sciences, Beijing, China

Henriette Zeidler

Sapienza University of Rome, Rome, Italy

Bill Thompson

UC Berkeley, Berkeley, California, United States

Jan Engelmann

University of California, Berkeley, Oakland, California, United States

Abstract

No matter how brilliant, one person cannot achieve major technological innovations alone. Human progress relies upon our ability to think together, building beyond an existing foundation of cumulative cultural knowledge (Heinrich & Muthukrishna, 2024). From five-years-old, children show cooperative capacities fundamental to this collective success (Warneken et al., 2014; Fletcher et al., 2012). Yet, little is known about children's capacity to pool mental resources with cooperative partners – if they can think together as interconnected nodes to surpass individual computational limits (Velez et al., 2022). Prior developmental research also does not fully address cross-cultural diversity in children's cooperative strategy (Rogoff, 2014). Here, we investigate how pairs of children (N = 96 dyads) cooperate on a memory task across two cultural contexts – Nanyuki, Kenya and Beijing, China. We find that children flexibly employ different strategies based on the level of cognitive demand, pointing to an early capacity for strategic cognitive collaboration.