

Catalyzing Change in Early Childhood and Elementary Mathematics: Initiating Critical Conversations

KEY RECOMMENDATIONS

Broaden the Purposes of Learning Mathematics

Each and every child should develop deep mathematical understanding as confident and capable learners, understand and critique the world through mathematics, and experience the wonder, joy, and beauty of mathematics.

Create Equitable Structures in Mathematics

Early childhood and elementary mathematics should dismantle inequitable structures, including ability grouping and tracking, and challenge spaces of marginality and privilege.

Implement Equitable Mathematics Instruction

Mathematics instruction should be consistent with research-informed and equitable teaching practices that nurture children's positive mathematical identities and strong sense of agency.

Develop Deep Mathematical Understanding

Early childhood settings and elementary schools should build a strong foundation of deep mathematical understanding, emphasize reasoning and sense making, and ensure the highest quality mathematics education for each and every child.

Why We Need to Catalyze Change in Early Childhood and Elementary Mathematics

1. Too many children form negative views of mathematics and of themselves in relation to mathematics by the time they leave elementary school.
2. Mathematics instruction overemphasizes memorization of basic number facts and procedural skills at the expense of developing deep conceptual understanding. This tendency is worse in schools with intense accountability pressures.
3. Children's mathematics learning in the early grades predicts later mathematics success, yet early childhood mathematics lacks funding and priority.
4. Children who do not have regular opportunities to collaborate on challenging tasks, use varied strategies, or focus on sense making have lower mathematics achievement than those afforded such opportunities.
5. The common practice of grouping children by perceived abilities for mathematics instruction segregates children into separate experiences and sets them on pathways leading to differential and unjust mathematics learning outcomes.
6. Children who are identified as Black, Latinx, Indigenous, language learners, poor, or with disabilities, along with other marginalized learners, do not have the same opportunities as their peers to access and learn in mathematically powerful spaces.

Experience the wonder, joy, and beauty of mathematics.