

What makes young learners want to know more? Age-related shifts in curiosity about behavior

Daniel Yonas, Ph.D. | Mixed-methods developmental & behavioral research | Adapted from a peer-reviewed study (*Child Development*, 2024) into an applied, education-outcomes frame

THE QUESTION I SET OUT TO ANSWER

I wanted to know **what drives a learner to seek more information** about the social world, and how that motivation changes as children develop. If we understand when and why curiosity switches on, we can design learning experiences and content that meet learners where their attention already lives.

HOW I APPROACHED IT

I designed and ran a three-study program with **669 participants** across three developmental stages (ages 4–6, ages 7–9, and adults), using a forced-choice paradigm: I showed each participant matched pairs of behaviors and measured which one they wanted to learn more about. I pre-registered every hypothesis and analysis plan, powered the samples in advance with G*Power, and combined in-person testing of children with an online adult panel so the findings would generalize across audiences and collection modes.

WHAT I FOUND

- Curiosity is **not fixed** — it follows a developmental arc. Older children and adults were markedly more curious about some events than others (effect sizes $d = 0.52\text{--}0.63$), while the youngest learners showed almost no preference ($d = 0.12$).
- The shift was driven by a specific cognitive change: **older learners reason about the "why" behind behavior** (intent), and that reasoning, rather than simple surprise, is what turns curiosity on.
- I confirmed the pattern held by **replicating it across two further studies** and ruling out a competing explanation, so the conclusion rests on converging evidence rather than a single result.

669

participants across 3 developmental stages

3

connected studies, pre-registered & replicated

2

data sources triangulated (in-person + online panel)

MY ROLE

Lead researcher and first author. I owned the research questions, study design, instrument development, data collection, statistical analysis, and the written narrative end to end.

METHODS & TOOLS

Experimental design

Pre-registration

Power analysis

Forced-choice paradigm

Mixed samples

R / statistical modeling

Effect-size reporting

Replication

WHY IT TRANSFERS

The mechanics here are the mechanics of applied user and learner research: define a sharp question, instrument it cleanly, triangulate multiple sources, and separate the real signal from the plausible-but-wrong story. The audience changes; the rigor does not.

SO WHAT — THE APPLIED TAKEAWAY FOR EDUCATION OUTCOMES

Because information-seeking is developmentally staged, **one-size-fits-all content under-serves the youngest learners**, who are not yet pulled by the "why" that motivates older ones. The lever for engagement is not more information; it is matching the prompt to the reasoning a learner is actually doing at their stage.

For an education product, this points to concrete design moves: scaffold "why" prompts that scale with developmental readiness, and measure engagement by what learners choose to explore rather than what they passively receive. That same translation — from behavioral finding to a decision a product team can act on — is the work I do.

Source study: Yonas, D., & Heiphetz Solomon, L. (2024). Age-related changes in information-seeking behavior about morally relevant events. *Child Development*. Funded by the National Science Foundation (#2044360) and the John Templeton Foundation (#61808). | This one-pager reframes peer-reviewed findings for an applied audience; the full manuscript is available on request.