

Co-designing AI-enhanced bilingual STEM e-books with families

Qualitative research | Family co-design + thematic analysis | 20 Latino families in co-design, 120 in RCT, children ages 5–7



Family-created design artifact

Parents' AI image created based on the story skeleton created during a co-design session

Research focus

How can bilingual e-books combine culturally familiar stories, AI-powered dialogue, and caregiver–child prompts to support early science learning and meaningful family interaction?

Approach

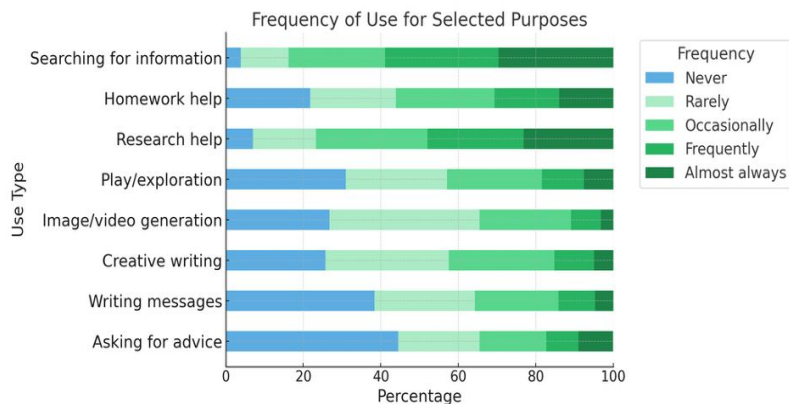
We conducted co-design sessions with latine families in Spanish focused on story content, language options, interactive features, and AI prompts. I analyzed transcripts, recordings, field notes, and family-created materials to translate families' experiences into design requirements.

Impact

- Established culturally relevant storytelling and flexible bilingual support as core family needs.
- Elevated digital safety and AI literacy as design priorities.
- Findings are shaping 24 bilingual e-books and an upcoming RCT evaluation.

Understanding student AI use in Mexico

Quantitative research | Survey design + statistical analysis | 7,500+ public high school students



Behavior across use cases

Frequency of generative AI use varied substantially by activity, revealing both adoption and literacy gaps. **Study Survey Question:** Have you used generative AI to help you with any of the following activities? (For each one, mark the frequency of use)

Research focus

How do adolescents use AI in their learning processes, and what individual, social, and contextual factors shape how and why they engage with it?

Approach

I contributed to a large-scale anonymous survey adapted from an established framework. Using quantitative and open-ended data, we examined AI use, confidence, self-concept, training experiences, perceived impact, and reliance.

Impact

- Translated findings from 7,500+ students into a policy brief with actionable guidance for educators, policymakers, and educational technology designers.
- Identified priorities for age-appropriate AI literacy, domain-specific teacher training, and AI tools that scaffold reasoning and self-regulation rather than replace student thinking.

See also [Policy Brief](#) & [ReVista article](#)