

EARLY-STAGE EVIDENCE · STRUCTURAL EQUATION MODELING

AI and the Modern Parent

Parental perceptions of benefits, concerns, and implementation support for AI in early childhood, from a structural equation model of 451 Kenyan parents.

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Do parents welcome AI into early childhood, or resist it? This snapshot summarizes a cross-sectional survey of 451 Kenyan parents of children aged 0–8, analyzed with exploratory and confirmatory factor analysis and structural equation modeling across three constructs: perceived benefits, parental concerns, and implementation support. Parents show measured optimism: benefits are recognized but rated moderately, concerns about privacy, bias, and creativity loss are high, and implementation support, clear policies, teacher training, and alignment with play, is by far the strongest predictor of adoption intention. Critically, concerns do not suppress adoption directly; instead they predict stronger demand for safeguards. Parents are not resisting AI, they are conditioning acceptance on institutional readiness rather than technological capability alone.

FINDINGS

IMPLICATIONS

 **Implementation support dominates adoption:** $\beta = 0.66$
Clear policies, teacher training, and alignment with play-based learning outweigh perceived benefits ($\beta=0.25$) more than 2.5× over.

 **Concerns don't block adoption:** $\beta = 0.01$, n.s.
Despite high mean concern (3.98/5) about privacy, bias, and creativity loss, concerns show no significant direct drag on adoption intention.

 **Unmet training needs suppress adoption:** $\beta = -0.13^{**}$
Parents who feel unprepared to guide AI use pull back on adoption, even when they recognize the tool's potential value.

 **Socio-emotional AI is the least trusted:** $\beta = 0.63$ vs 0.78
Cognitive-development benefits load far more strongly than socio-emotional benefits, the weakest indicator in the Benefits construct.

 **Concerns fuel demand for safeguards:** $\varphi = 0.665$
The strongest relationship in the model: parents with the highest concerns also show the strongest demand for implementation support.

 **Confidence is a real adoption lever:** $\beta = 0.15^{**}$
Yet self-efficacy is only moderate (3.60/5) against a strong desire to actively guide children's AI use (4.31/5), a preparedness gap.

 **Lead with governance, not features**
Publish clear usage policies and safety standards before or alongside launch. Policy clarity is the single strongest lever for parental adoption.

 **Treat concerns as demand signals, not blockers**
Don't suppress or dismiss privacy and bias worries. Respond with visible, legible safeguards that parents can actually see in the product.

 **Invest in teacher training as an adoption lever**
Teacher preparedness is one of the strongest implementation-support indicators ($\beta=0.60$): fund it as core infrastructure, not an add-on.

 **Lead marketing with cognitive, academic gains**
Math and literacy framing resonates more strongly than socio-emotional claims; lead there and let creativity benefits follow as a secondary message.

 **Build parent confidence through onboarding**
Confidence in guiding AI use predicts adoption. Short, guided onboarding can close the gap between wanting to guide and feeling able to.

 **Position AI as a supplement to play, explicitly**
"Complements, not replaces, play-based learning" is one of the strongest support indicators ($\beta=0.71$): say so in product design and messaging.

METHODOLOGY AT A GLANCE

SAMPLE

451
Kenyan parents, children 0–8

METHOD

EFA · CFA · SEM
Maximum likelihood

ITEMS

14
Likert items · 3 factors

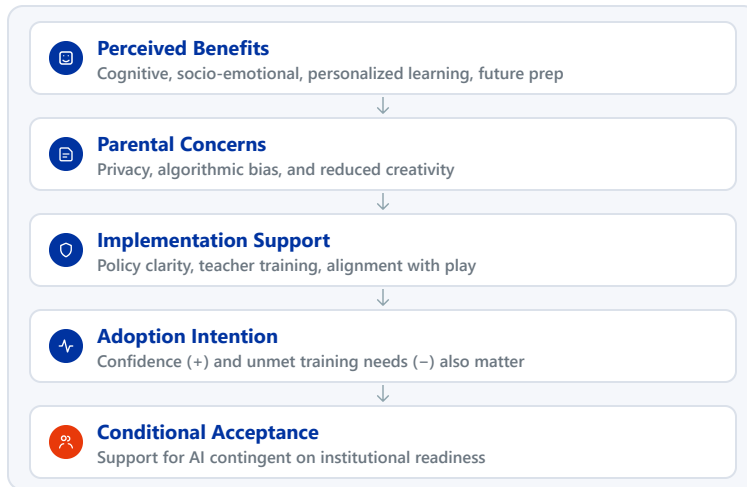
ETHICS REVIEW

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CONSTRUCTS MODELED

Benefits **Concerns** **Support**
Confidence **Training**

1 CONTEXT: FROM PERCEPTION TO ADOPTION



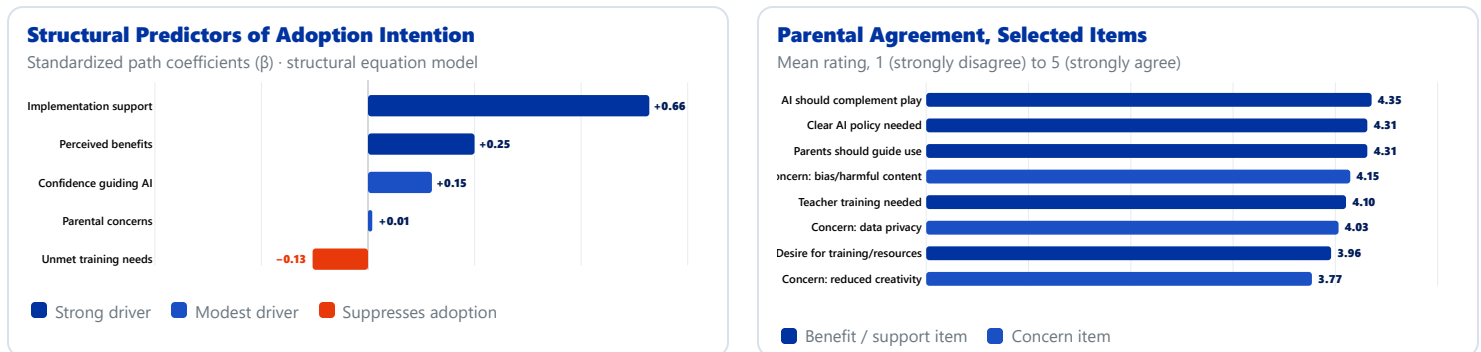
- Opportunity**
Parents most trust AI to enhance cognitive development ($\beta=0.78$) and prepare children for future careers ($\beta=0.73$).
- Privacy concern**
Bias/harmful content ($M=4.15/5$) and data privacy ($M=4.03/5$) are parents' two most elevated worries.
- Institutional gap**
Parents want clear policy ($M=4.31/5$) and teacher training ($M=4.10/5$) that, in Kenya today, mostly does not yet exist.
- Confidence gap**
Self-efficacy to guide AI use ($M=3.60/5$) trails well behind the desire to actively guide it ($M=4.31/5$).

2 RESEARCH DESIGN: THREE CONSTRUCTS, TEN INDICATORS

CONSTRUCT	INDICATORS (OBSERVED ITEMS)	STD. LOADING RANGE	COMPOSITE MEAN (1-5)
Perceived Benefits	Cognitive development, socio-emotional skills, personalized learning, future-career prep	0.60 – 0.78	3.26 (SD 0.96)
Parental Concerns	Data privacy, bias / harmful content, reduced creativity or independent thinking	0.56 – 0.79	3.98 (SD 0.82)
Implementation Support	Clear policies & guidelines, complements play-based learning, teacher training	0.45 – 0.86	4.26 (SD 0.70)

Three-factor EFA solution (principal axis factoring, KMO 0.64–0.76) confirmed by CFA ($\chi^2=313.36$, $df=32$; CFI=0.815, RMSEA=0.140) and extended via SEM (adoption intention as endogenous variable, $N=451$, maximum-likelihood estimation).

3 KEY QUANTITATIVE RESULTS



4 WHAT DRIVES CONDITIONAL ACCEPTANCE

“Parents are not resisting AI in early childhood; they are withholding full support until institutions earn it.”

GOVERNANCE

$\beta = 0.66$

Implementation support is the dominant predictor of adoption intention, more than 2.5× the effect of perceived benefits.

CONCERNS

$\varphi = 0.665$

Concerns correlate most strongly with demand for safeguards, not with lower adoption: a catalyst for conditions, not rejection.

PREPAREDNESS

3.60 vs 4.31

Parents' confidence guiding AI use (3.60/5) lags well behind their desire to actively guide it (4.31/5).

5 BOTTOM LINE

TAKE-AWAY FOR DEVELOPERS, POLICYMAKERS & EDUCATORS

Parents are not the barrier to AI in early childhood; weak institutional readiness is. Win policy, training, and trust, and adoption follows.