AFARA.AI | Theory of Change

AI-Powered Teacher Professional Development for Foundational Literacy & Numeracy

The Problem

Africa's foundational learning crisis is fundamentally a teacher support crisis. Over 272 million children in Sub-Saharan Africa are not achieving basic literacy and numeracy, not primarily because they lack access to school, but because teachers in low-resource contexts receive little to no continuous professional development. TPD models are episodic, centralised, and poorly adapted to local realities. Without sustained instructional support, even motivated teachers struggle to deliver effective foundational learning.

The Intervention

Afara.AI is a mobile-first, multilingual AI teaching assistant currently live on Telegram and a web platform, with WhatsApp integration in development. It requires no downloads, minimal data, and works on basic smartphones. By building on platforms teachers already use and removing technology barriers, Afara.AI makes continuous, personalised professional development available to teachers in the most fragile and under-resourced contexts at scale.

The Change Pathway

Inputs	Activities	Outputs	Short-term Outcome	Long-term Outcome
AI platform Telegram, web platform & hybrid LLM stack	**Activities** My Assistant, My Courses, My Circles	**Outputs** Lesson plans, CPD modules, peer networks	**Teacher impact** Better practice, confidence & skills	**Improved FLN outcomes** Children achieve foundational literacy & numeracy across Sub-Saharan Africa

Two-Horizon Outcome Framework

Evidence of impact is built across two-time horizons, reflecting the natural lag between teacher development and learner outcomes.

Horizon 1 6–12 months	Improved teacher instructional practice: measurable via lesson plan quality, quiz completion rates, micro-CPD module engagement, and self-reported confidence scores. Leading indicators are trackable across 1,000+ active users, including a structured pilot cohort of 145 teachers across Nigerian schools.
Horizon 2 24–36 months	Improved learner foundational literacy and numeracy outcomes: measurable via standardised FLN assessments in partner schools. Built on a strong existing evidence base: RTI International, J-PAL, and USAID research consistently shows that structured pedagogy delivered through sustained TPD improves FLN scores significantly.

Key Assumptions

Assumption	Current evidence	Risk mitigation
Teachers have smartphone access	Telegram & web platform adoption confirmed across 1,000+ active users in Nigeria; WhatsApp integration in development for broader reach	Verify access profiles at expansion into new geographies
Teachers engage regularly	1,000+ active users on platform, including 145 in structured pilot cohort; organic adoption signals genuine demand beyond organised outreach	Peer circles (My Circles) and gamification elements designed to sustain engagement
Basic data connectivity available	Telegram & web platform function on minimal data; low bandwidth by design. WhatsApp integration in development to extend reach further	Acknowledged gap in zero-connectivity contexts; roadmap includes SMS-based fallback

Evidence Base

Afara.AI's model is grounded in a well-established body of research demonstrating that structured pedagogy combined with continuous teacher professional development reliably improves foundational literacy and numeracy outcomes. Key sources include:

- RTI International: EGRA/EGMA studies showing structured pedagogy improves early grade reading scores by 20–40% in low-resource African contexts
- J-PAL: Evidence reviews confirming continuous in-service teacher support is among the highest-impact interventions for learning outcomes
- USAID/All Children Reading: Evidence that mother tongue-based multilingual instruction significantly improves FLN acquisition

Afara.AI is the delivery mechanism for an already evidence-backed approach, bringing proven pedagogy to teachers who previously had no access to it.