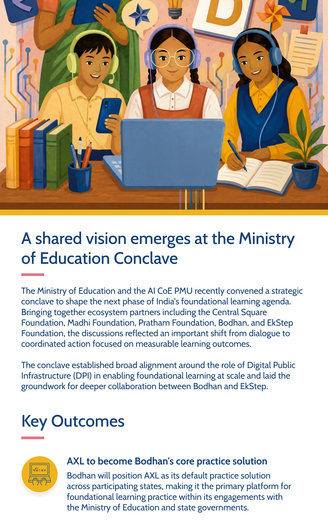
ASSISTED LANGUAGE AND MATH LEARNING

A philanthropic initiative of EkStep

# CHARTING THE ROADMAP FOR FOUNDATIONAL LEARNING



## A shared vision emerges at the Ministry of Education Conclave

The Ministry of Education and the AI CoE PMU recently convened a strategic conclave to shape the next phase of India's foundational learning agenda. Bringing together ecosystem partners including the Central Square Foundation, Madhi Foundation, Pratham Foundation, Bodhan, and EkStep Foundation, the discussions reflected an important shift from dialogue to coordinated action focused on measurable learning outcomes.

The conclave established broad alignment around the role of Digital Public Infrastructure (DPI) in enabling foundational learning at scale and laid the groundwork for deeper collaboration between Bodhan and EkStep.

## Key Outcomes

### AXL to become Bodhan's core practice solution

Bodhan will position AXL as its default practice solution across participating states, making it the primary platform for foundational learning practice within its engagements with the Ministry of Education and state governments.

### Advancing AI-powered assessment

Participants reaffirmed the importance of AI-enabled assessment, particularly the ability to conduct large-scale listening assessments for literacy. This capability was identified as a high-impact area for improving system-wide visibility into learning outcomes.

### Consensus on a foundational learning DPI

The conclave reached broad agreement on establishing a Digital Public Infrastructure framework dedicated to foundational learning outcomes. EkStep and Bodhan will jointly define the specifications and implementation roadmap that can support state-level adoption.
These areas of alignment—practice through AXL, AI-powered assessment, and the DPI framework—will form the basis of the forthcoming collaboration between EkStep and Bodhan.

### Renewed discussion on Energised Textbooks

The meeting also reopened conversations around Energised Textbooks (ETBs) as a way of bringing AI into classroom learning. While national adoption through NCERT remains uncertain, there was strong interest in exploring state-led implementations.

## Insights from the Field

The discussion was grounded in implementation realities drawn from AXL deployments across states. The discussion surfaced some practical barriers that continue to limit technology-based learning – the limited availability of headphones in school computer labs, for example. These will be shared with the Ministry as important operational considerations.
Participants also reaffirmed that EkStep's existing numeracy screeners—broad, detailed, and short—remain valid components of the assessment ecosystem, as the underlying assessment framework continues to be relevant.

## A Two-Stage Framework for Foundational Learning

The conclave proposed framing foundational learning as two distinct but connected journeys.

**Prepare (Grades 1–3)**

Build strong readiness in reading and numeracy so that every child develops essential foundational skills.

**Repair (Grades 4–8)**

Enable continuous and efficient catch-up for children who have fallen behind, recognising that recovery is an ongoing process rather than a one-time intervention.
This distinction provides a clearer lens for designing instruction, practice, and assessment across age groups.

## Rethinking Digital Public Infrastructure

One of the strongest themes to emerge was that India's challenge is no longer understanding how children learn.

The education ecosystem already possesses effective pedagogical approaches. The greater challenge lies in creating the infrastructure needed to operationalise these approaches consistently and at scale.
Within this vision, DPI emerges as a management layer, similar in spirit to identity infrastructure such as Aadhaar, that enables coordinated action across the ecosystem.

**The proposed DPI would support two critical functions:**

- Secure management of learner identity and privacy; and
- Coordinated management of learning outcomes.

Participants also discussed a model in which states remain the custodians of children's identity and privacy-sensitive information. This would simplify compliance with the Digital Personal Data Protection (DPDP) Act while reducing the privacy burden on ecosystem partners.

## The Four-Layer DPI Architecture

A broad consensus emerged around a four-layer architecture for foundational learning DPI.
Consistent with the National Digital Education Architecture (NDEAR), each layer would be defined through open specifications and APIs, enabling interoperable building blocks rather than bespoke systems.

**DPI Four-Layer Construct**

**LAYER 4**
**Data + Management System**
Functions as both a data system and a managed system for locating and orchestrating improvement actions

**LAYER 3A**
**Classroom Assessment Data**
Fed in by teachers through classroom-level assessment

**LAYER 3B**
**Technology-Based Solutions**
Fed in by learning and assessment technology solutions

**LAYER 2**
**Data**
Child-level outcomes and assessment data, aligned to the NCF Foundational Stage

**LAYER 1**
**Identity**
Core layer — federated identity for students, teachers, and institutions

Foundational layer

(NDEAR Report, p.27; NDEAR Ecosystem Policy, Building Blocks and Ecosystem Approach, p.2)

The proposed path forward: define a standard spec for DPI, then operationalize it through thin, state-level implementations to sustain and orchestrate action over time.

## Looking Ahead

The conclave marks an important milestone in India's foundational learning journey. More importantly, it signals a shift from fragmented initiatives toward a shared, outcomes-driven ecosystem.

With agreement around AXL as the core practice solution, continued investment in AI-enabled assessment, and a common vision for Digital Public Infrastructure, the foundations for coordinated action are now in place.

**The next phase will be defined not by further discussion, but by execution—through the EkStep - Bodhan partnership, state-level implementations, and a shared commitment to improving learning outcomes for every child.**