NIPUN MAHARASHTRA

A State-Led FLN Mission Powered by AI and an Evidence Ecosystem

Evidence Document

Comparative Impact: December 2025 to March 2026

Four monthly assessment cycles.
~34 lakh students. 1.6 lakh teachers. 65,000+ government schools.
+16 to +20 percentage point gains in foundational learning within a single academic cycle.

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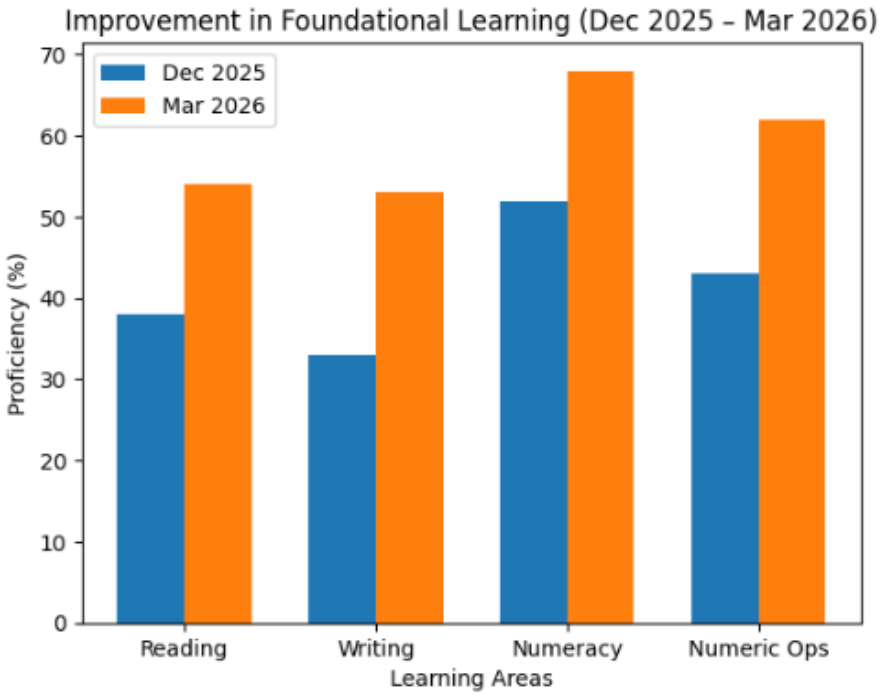
1. Executive Summary

NIPUN Maharashtra is a real-time, AI-powered learning measurement and improvement system deployed across all 36 districts of Maharashtra. Every month, 1.6 lakh government school teachers assess approximately 34 lakh children in reading, writing, numeracy, and numeric operations using the NIPUN Maharashtra mobile application. Each assessment is evidence-backed: reading is transcribed by an AI trained on children's Marathi speech; writing and numeracy are captured through uploaded photos of the child's work.

The system is built on a triple-verification architecture. Teacher assessments are re-verified by supervisor officers through nested supervision, and a random sample is independently audited by VOPA's own team. This makes NIPUN Maharashtra the first FLN measurement system in India to generate verified, child-level evidence at full state scale.

Between December 2025 and March 2026, the system completed four full assessment cycles. The results are striking.

Headline Findings



Within a single academic cycle (Dec 2025 to Mar 2026), the system demonstrated sharp and measurable gains in foundational learning outcomes across ~34 lakh students. Reading proficiency improved from 38% to 54% (+16 points), writing from 33% to 53% (+20 points), numeracy from 52% to 68% (+16 points), and numeric operations from 43% to 62% (+19 points). These are not marginal shifts — they indicate consistent, system-wide movement within just four months. What strengthens the credibility of this improvement is the assessment architecture itself: outcomes are based on AI-enabled, evidence-

backed evaluations that are triple-verified through teacher assessments, supervisor-led re-assessments, and independent random audits by VOPA. This combination of scale, speed, and verification makes the gains both reliable and significant — setting a new benchmark for how foundational learning can be measured and improved in large public systems.

These gains were achieved within a single academic cycle, at a system cost of approximately ₹0.17 per assessment (roughly USD 0.002 per assessment). They represent the fastest documented FLN improvement at state scale in India.

> ***In essence, we are converting India's education system from assumption-driven to evidence-driven — at the cost of ₹0.17 per assessment.***

2. The Problem: The System Does Not Know What Children Can Actually Do

India's National Education Policy 2020 places Foundational Literacy and Numeracy (FLN) at the centre of school education. Yet, at the start of NIPUN Maharashtra, existing measurement systems painted sharply different pictures of children's learning:

Source / Survey	Reported Reading Proficiency (Maharashtra)
PARAKH / NAS (national assessment)	~74%
ASER (citizen-led assessment)	~50%
VSK (state data system, self-reported)	~69%
NIPUN Maharashtra (AI-based, evidence-backed, Dec 2025)	**~38%**

The gap between reported and actual proficiency is not a rounding error. It is a system that does not know what its children can actually do. Between 10 and 19 lakh children in Maharashtra cannot read at grade level, depending on which survey one trusts. The previous measurement architecture could not tell the education system which child, in which school, in which block, was falling behind — and it could not tell that child's teacher in time to intervene.

This is an information asymmetry problem before it is a learning problem. Teachers taught without data. Administrators planned without data. Parents were told their children were fine. The gap persisted.

3. The Solution: An AI-Powered Decision System for Teachers

NIPUN Maharashtra is not an assessment app. It is a decision-support system that puts objective, real-time learning evidence directly into the hands of 1.6 lakh teachers, the people who make instructional decisions every day.

What a Teacher Actually Does

Once a month, each teacher opens the NIPUN Maharashtra app. The app shows every child in her class. For each child, she conducts a one-on-one assessment across four domains:

- Marathi reading, captured as an audio recording. An AI model fine-tuned on children's Marathi speech transcribes the recording and computes accuracy and fluency in real time.
- Marathi writing (dictation), captured as a photo of the child's writing, marked at the appropriate level.
- Numeracy, captured through structured problems, with photo evidence of the child's work.
- Numeric operations, similarly captured.

The teacher sees each child's current level within seconds. Where the child sits below grade level, the system generates a personalised learning plan drawing from free content hosted on the V-School platform. The teacher can act the next morning.

What Makes This Different

- **Evidence, not self-report.** Every assessment carries audio or photo evidence. Nothing is taken on trust.
- **Real-time, not retrospective.** Teachers, headmasters, block officers, district officers, and SCERT see results the moment they are recorded.
- **Low-bandwidth, low-cost.** The AI models are fine-tuned open-source Indic models, CPU-compatible, and work in rural schools with weak connectivity. Cost: approximately ₹0.17 per assessment.
- **Integrated with the state system.** The app is linked to SHALARTH (teacher payroll), SARAL (student data), and UDISE+ (school data). It is part of the state's public digital infrastructure, not a parallel system.

4. The Reliability Moat: Triple-Verified Data

Large-scale education data in India has long suffered from a credibility problem. Teachers report inflated numbers to meet system expectations. Administrators act on numbers they privately distrust. Funders and researchers treat the data as suggestive at best.

NIPUN Maharashtra is engineered to break this cycle. Every assessment moves through three independent layers of verification.

Layer	Who Verifies	What They Do
1	Classroom teacher	Conducts monthly one-on-one assessment with every child; uploads audio (reading) and photo (writing, numeracy) evidence. Teacher marks the level in the app.
2	Government supervisor officers (Block Education Officers, Extension Officers, Kendra Pramukhs)	The app randomly selects approximately 10% of students in each class for supervisor re-assessment. Supervisors visit the school and re-assess these children independently. Discrepancies between teacher and supervisor assessments are flagged and reviewed.
3	VOPA's own audit team	Random samples of assessments are drawn from across the state. VOPA's team listens to audio recordings and inspects photo evidence to detect malpractice: supervisor prompting, teacher attempting the test on the child's behalf, duplicate recordings, and similar issues. Findings are shared with SCERT.

What the Audit Reveals

In the most recent cross-checking cycle, VOPA's audit team reviewed 591 student recordings at random across Maharashtra.

- **~95% of recordings** were found to be clean, with teachers and students following the prescribed protocol.
- **~5% of recordings** showed irregularities — supervisor prompts, teacher attempting the test, or similar. These cases are flagged for the district and re-processed.

An earlier audit cycle (supervisor-led round, Aug–Oct 2025) reviewed 501 recordings, with irregularities observed in approximately 9% of cases. The drop from 9% to 5% across cycles reflects the maturing of the protocol and the deterrent effect of being audited.

> ***Triple verification turns NIPUN Maharashtra into something rare in Indian education: a state-scale dataset that funders, researchers, and policymakers can actually trust.***

5. Impact: December 2025 to March 2026

Between December 2025 and March 2026, NIPUN Maharashtra completed four monthly assessment cycles across Grades 2 to 5. The data presented below is restricted to Marathi-medium students (approximately 37.1 lakh enrolled) to ensure comparability across cycles.

5.1 The Headline Numbers

Subject	December 2025	March 2026	Gain (pp)
Reading	37.9%	**54.4%**	**+16.5**
Writing	33.2%	**52.8%**	**+19.6**
Numeracy	52.0%	**67.7%**	**+15.7**
Numeric Operations	42.9%	**61.6%**	**+18.7**

Values are the percentage of present-and-assessed students reaching the highest proficiency level in each subject. Source: NIPUN Maharashtra platform, Dec 2025 and Mar 2026 cycles. Marathi-medium cohort, Grades 2–5.

5.2 Coverage and Participation

Metric	March 2026 Cycle
Enrolled students (Marathi-medium, Grades 2–5)	37.1 lakh
Students assessed (including absent)	~32 lakh
Students assessed (present only)	~31.5 lakh
Teachers actively using the system	~1.6 lakh
Schools covered	~65,000
Districts covered	All 36
Assessment cycles completed (Dec 2025 – Mar 2026)	4

Coverage itself improved across the cycle. Between December and March, the proportion of enrolled students actually assessed rose from approximately 81% to 85% — not because the denominator fell, but because teacher participation, system stability, and district-level accountability all strengthened.

5.3 Grade-wise Reading Gains

Grade	Dec 2025 (% at highest)	Mar 2026 (% at highest)	Gain (pp)
Grade 2	23.0%	**40.1%**	**+17.1**
Grade 3	26.6%	**42.7%**	**+16.1**
Grade 4	36.7%	**51.3%**	**+14.6**
Grade 5	34.3%	**49.0%**	**+14.7**

Gains are consistent across grades. Grade 2, where the foundational reading challenge is most acute, shows the largest absolute gain.

5.4 District-Level Equity

A state-scale number can hide uneven performance. NIPUN Maharashtra makes district-level disparity visible and, more importantly, narrowing.

Subject	Round	Highest district	Lowest district	Relative gap
Reading	Dec 2025	68.2%	7.4%	9.2x
Reading	Mar 2026	76.0%	21.9%	**3.5x**
Writing	Dec 2025	64.5%	5.7%	11.3x
Writing	Mar 2026	75.1%	20.2%	**3.7x**
Numeracy	Dec 2025	84.3%	20.7%	4.1x
Numeracy	Mar 2026	90.3%	41.4%	**2.2x**

In December, the best-performing district in reading scored 9.2 times higher than the worst-performing district. By March, that ratio had dropped to 3.5x. The lowest-performing districts are moving faster than the highest — a clear signal that the system surfaces underperforming regions to officers who can then act on them.

6. Why These Gains, in Only Four Months?

Four months is an unusually short window for foundational learning improvement. We owe it to reviewers, funders, and ourselves to be honest about what is and is not happening here.

What is happening

- **Teacher attention shifts.** Monthly measurement, with audio and photo evidence, makes the gap between each child's actual level and grade expectation undeniable. Teachers begin teaching to the child's level, not the textbook's level.
- **Assessment practice improves.** In the first cycles, teachers were learning how to use the tool. As familiarity grew, assessments became more accurate — and children also became familiar with the format, reducing test anxiety.
- **Supervision exerts pressure.** Block and district officers now see weekly dashboards showing which schools are falling behind. Underperforming schools receive mentoring visits within days, not months.
- **Underperforming districts catch up.** The district equity gap narrowed sharply (9.2x to 3.5x on reading). The system makes invisible underperformance visible.

What we are careful about

- **Measurement effect.** Part of the gain reflects teachers becoming more accurate at assessing. The real learning gain is likely somewhat smaller than the headline number, though still unprecedented. We do not hide this.
- **Selection of cohort.** The Dec–Mar numbers here are restricted to Marathi-medium students for comparability. Non-Marathi-medium cohorts are tracked separately.
- **External validation needed.** We are in conversation with CEGIS and J-PAL South Asia to design an independent evaluation that separates the measurement effect from the instructional effect. We will publish what they find, whatever it shows.

> ***We would rather be trusted than impressive. The gains are real. They are also the beginning of a longer research agenda, not the end of one.***

7. Why This Matters

Teachers

Before NIPUN Maharashtra, a government school teacher in Maharashtra had no reliable way to know, at the start of any given week, which of her 40 children could read a sentence and which could not. She guessed. She taught to the median. She passed her students up to the next grade whether they were ready or not.

Today, 1.6 lakh teachers wake up with a clear picture of every child. They can teach differently because they can see differently. That is a capability expansion, not a content intervention.

Headmasters and Administrators

Before NIPUN Maharashtra, block and district officers worked with annualised, self-reported numbers that everyone privately discounted. Today, approximately 60,000 headmasters and 6,000 education officers open a dashboard every morning and see, school by school, which classrooms are moving and which are stuck. They know where to go. Their decision cycle has moved from months to days.

Parents (Coming Next)

In the coming academic year, parents will gain login access to NIPUN Maharashtra. For the first time, they will see evidence of their child's actual reading level — the audio recording, the writing photo — along with simple, age-appropriate content targeted at that child's level. A parent who until now was told "your child is doing fine" will instead see what the child can actually do and what to practice at home.

This is the deepest layer of agency expansion in the project: the shift from a system that speaks to parents in platitudes to one that speaks to them in evidence.

The System Itself

NIPUN Maharashtra is designed as a digital public good. The infrastructure sits on SCERT's own cloud. The AI models are open source. The content is free. The per-child cost to the state is approximately ₹1 per year. When the system matures, VOPA's role can shrink. The state will own it. That is the point.

8. What Support Would Enable

Reaching this scale has been a build-and-deploy exercise. What it now requires is three things we cannot fund from implementation budgets.

- **Independent evaluation.** A rigorous, externally-led evaluation — designed with CEGIS or J-PAL South Asia — that separates the measurement effect from the instructional effect and produces publishable evidence of teacher decision-making change and learning outcome causality.
- **The parent layer.** Full rollout of parent login and evidence transparency to over 30 lakh parents in Maharashtra, with privacy protections, multilingual content, and a usage-tracking framework to measure whether parent agency actually shifts household learning behaviour.
- **Deepening, not sprawling.** Strengthening teacher coaching, headmaster dashboards, and personalised learning content within Maharashtra so that the proficiency gains compound across cycles rather than plateauing.

The Pathway to 1 Million Users (Within Maharashtra)

Most ed-tech programs talk about scaling by adding new states. NIPUN Maharashtra crosses 1 million users by going deeper, not wider — and the path is already in motion.

User Group	Active in System	Status
Teachers	~1.6 lakh	Live; assessing every month across all 36 districts.
Headmasters	~60,000	Live; using school-level dashboards for supervision and review.
Supervisor and education officers	~6,000	Live; conducting nested re-assessments and acting on dashboards.
Parents	**15+ lakh**	Rolling out in the next academic year (2026–27); login, evidence access, and personalised learning content for the parent of every assessed child.
Total active users (projected, 2026–27)	**> 2 million**	**Driven entirely by deepening within Maharashtra.**

In the current academic year, NIPUN Maharashtra is already actively used by approximately 2.2 lakh adults — teachers, headmasters, and education officers — within the state government school system. Adding the parent layer in the next academic year takes the system well past 1 million active users, and likely past 1 crore, without expanding outside Maharashtra. This is an unusually disciplined scaling strategy: rather than diluting the model across multiple states with weaker partnerships, we deepen the system inside one state until it is irreversible — until the government cannot imagine running its school system any other way.

Inter-state replication is a question for after the Maharashtra system is mature, audited externally, and fully institutionalised. We will not pre-empt it.

9. For Further Review

Live System

- **Real-time dashboard:** https://nmstats.vopa.in
- **AI-based reading assessment tool:** https://orf.vopa.in

Organisation

- **Website:** https://vopa.in
- **LinkedIn:** https://www.linkedin.com/company/vowels-of-the-people/

References Available on Request

- **Mr. Rahul Rekhawar, IAS** — Ex Director, SCERT Maharashtra. Government partner validating state-scale teacher adoption and learning outcomes.

- **CEGIS (Centre for Effective Governance of Indian States)** — Research partner documenting NIPUN Maharashtra as a scalable FLN model.

Recognition

- **Koita Foundation Tech Award 2025** — 1st Runner-Up, for use of AI to address real-world challenges in public education.
- **JUST AI Awards 2025 (Asia Pacific)** — for building technology that promotes justice and equity in public education.

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Data herein reflects the NIPUN Maharashtra Dec 2025 and Mar 2026 assessment cycles (Marathi-medium cohort, Grades 2–5). Per the MOU with SCERT Maharashtra, raw assessment data is confidential; the summary figures presented here are cleared for external reference.