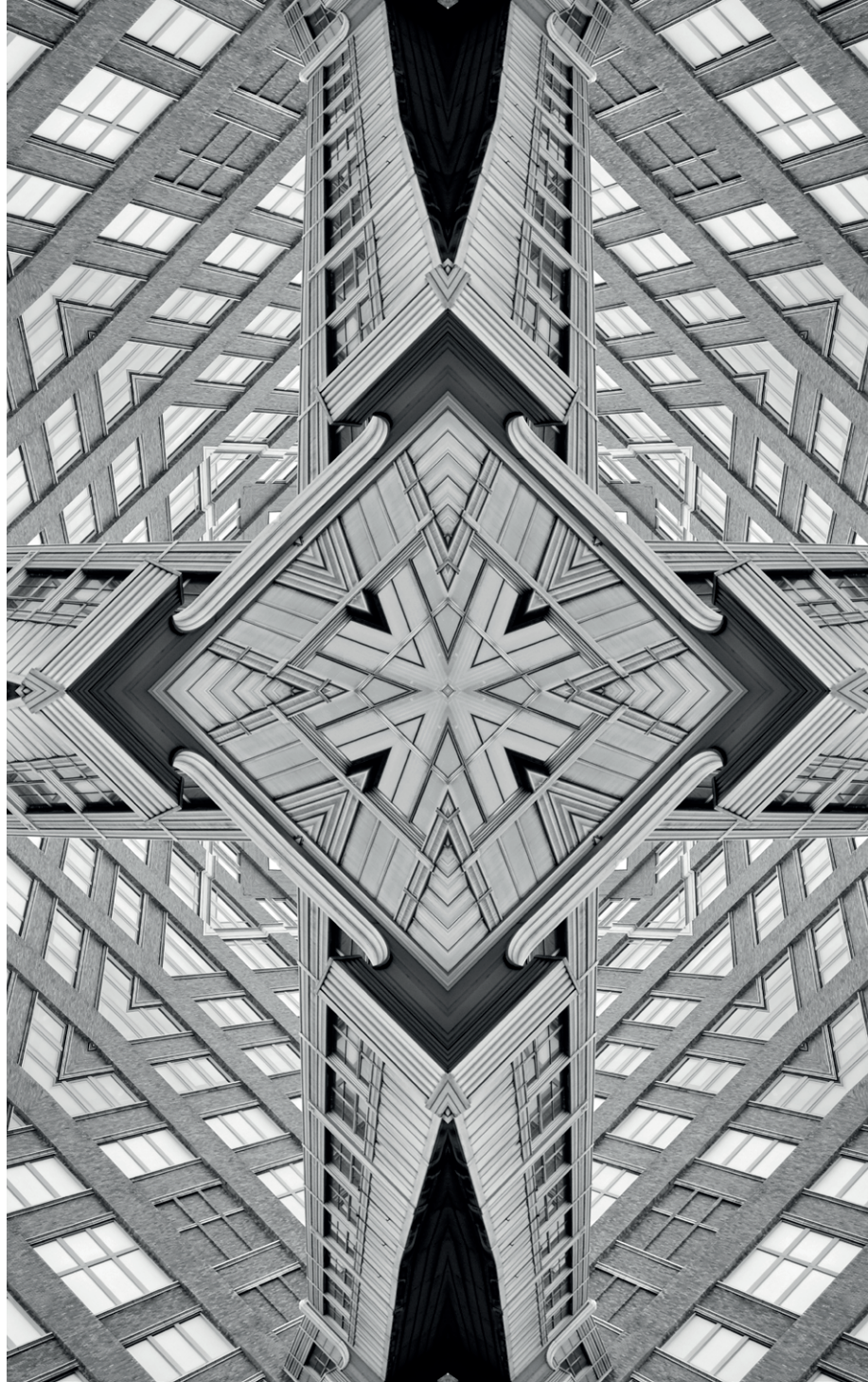




Issue Brief

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Tracking Regional Disparities in Learning Outcomes

Arpan Tulsyan and Ishika Ranjan

Abstract

This brief examines India's foundational literacy and numeracy (FLN) landscape in the context of SDG 4 and the National Education Policy (NEP) 2020. It focuses on the findings of the 2024 report of the national assessment regulatory body, PARAKH, released in July 2025. The results highlight three conclusions: (a) despite some post-pandemic recovery, FLN levels have not improved beyond the 2017 scores; (b) PARAKH records share intra- and interstate disparities, building a case for strengthening local governance capacities; and (c) rural government schools surpassed urban-private schools in several states, suggesting that the NIPUN Bharat Mission's targeted interventions may be working, while urban strategies lag. The brief urges the states to adopt micro-planning and robust, real-time data systems to close entrenched learning gaps, positioning integrated monitoring as essential.

India is committed to ensuring equitable and quality education for all, based on the principles of Sustainable Development Goal 4 (SDG 4).^{a,1} This has been reiterated in the National Education Policy (NEP) 2020, which outlines goals such as universal foundational literacy and numeracy, learner-centred pedagogy, reforms in teacher training, and leveraging technology to narrow learning gaps.²

As part of the implementation of the NEP, India has ushered in large-scale reforms in the last five years, such as the National Curriculum Framework (NCF) 2023³ and the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN) Bharat Mission.⁴ Launched by the Ministry of Education in 2021, NIPUN is a flagship mission targeting universal foundational literacy and numeracy (FLN) skills by the academic year 2026–27.⁵ The mission is implemented through a five-tier national, state, district, block, and school-level architecture to ensure accountability, regular monitoring, and alignment with local needs (see Table 1). It combines a comprehensive strategy of teacher capacity building, development of learner-friendly materials, periodic learning assessments, community engagement, and leveraging technology to track and improve learning outcomes.

Table 1: NIPUN Bharat Mission: Approach and Implementation

Mission Goal	Achieve universal FLN for all children in Grade 3 by 2025.
Holistic Framework	Focuses on cognitive, socio-emotional, and physical development and not just academics.
Five-Tier Implementation Structure	Actions coordinated at national, state, district, block, and school levels, ensuring accountability and support at each stage.
Learning Outcomes and Pedagogy	Defines clear age-wise and grade-wise FLN targets; prioritises activity-based, child-centric teaching; and discourages rote learning.
Teacher Empowerment	Intensive training, resource toolkits (NISHTHA [National Initiative for School Heads' and Teachers' Holistic Advancement] modules), ongoing mentoring for educators in FLN pedagogy.

^a SDG 4, adopted by the United Nations, requires signatory countries to guarantee inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030.

Assessment and Monitoring	Uses regular, formative assessments (Holistic Progress Card, APAAR (Automated Permanent Academic Account Registry) for tracking student progress and guiding interventions.
Community and Parental Engagement	Mobilises families, Panchayats and local leaders via awareness drives and capacity-building for home support.
Resource Development	Curates and distributes high-quality teaching-learning material and digital content in multiple languages.
Convergence	Aligns with other national programmes (Samagra Shiksha, NEP 2020) for coordinated impact across education stages.

Sources: Ministry of Education (MoE) 2021;⁶ NCERT 2024⁷

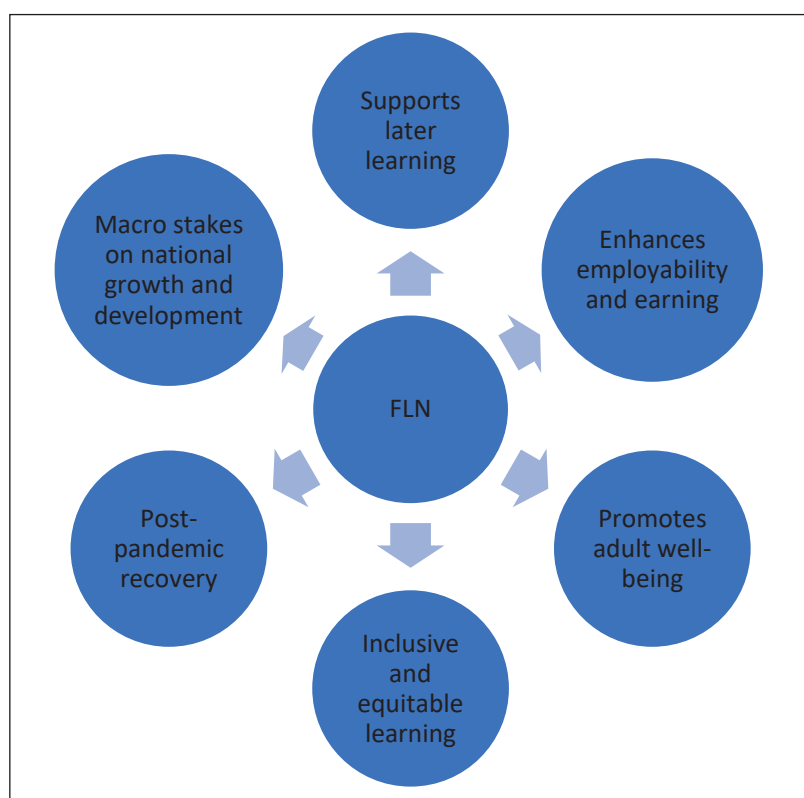
To track student learning outcomes in a consistent, rigorous, and nationally comparable manner, PARAKH (Performance Assessment, Review and Analysis of Knowledge for Holistic Development) was established under the National Council of Educational Research and Training (NCERT),⁸ to complement NIPUN Bharat. As India's national assessment regulator, PARAKH sets the national standards and plays a central role in establishing a common framework across states and boards of education to monitor performance and inform policy decisions.⁹

This brief uses data generated by PARAKH (2024, released in July 2025) to identify regional, subject-wise patterns and disparities in learning outcomes across grade levels 3, 6, and 9, which together represent the foundational, middle, and secondary stages outlined in India's NEP 2020. It also offers reflections and recommendations to bridge these gaps and ensure that every child, across geographies, has access to quality education and opportunities to thrive.

While disparities due to gender, caste, and other social identities and the learning outcomes in higher grades are equally important, they fall beyond the scope of the current study and are recommended for future investigation.

A growing body of research has demonstrated that strong foundational learning is the basis for all later learning and life outcomes.¹⁰ It can be further developed through schooling and training and is a crucial predictor of better life outcomes in areas such as employability, income, career progression, social mobility, and overall well-being.¹¹ Accordingly, individuals with strong foundational skills tend to have higher employment rates, better wages, more stable jobs, and less risk of unemployment, even in informal sectors, while also being better prepared to navigate dynamic labour markets, both local and global (see Figure 1).^{12,13}

Figure 1: The Lifelong Benefits of Foundational Learning and Numeracy



Source: Authors' own, based on insights from a joint UNICEF–UNESCO report (2024)¹⁴

Apart from being academic markers for individual students, foundational learning outcomes are also reliable predictors of national growth and development. The World Bank and UNESCO have jointly developed an indicator known as Learning Poverty, defined as the share of 10-year-olds who are unable to read and understand a simple, age-appropriate text.¹⁵ This composite indicator captures both schooling deprivation (children out of school) and learning deprivation (children in school but unable to read proficiently) and is a crucial metric to monitor global educational progress towards inclusive and equitable quality education. Economists also link high-quality early interventions in children's skill formation with substantial national returns.¹⁶

The COVID-19 pandemic resulted in unprecedented disruptions to schooling, with a worsening of foundational learning deficits, particularly in countries like India where there are huge digital divides.

Prioritising urgent remedial action through targeted intervention, teacher support, and sustained investments is crucial to recover learning losses and enable progression through higher grades to secure future employability.¹⁷

Finally, FLN deficits are larger for poorer, rural, and marginalised groups; closing early gaps is pivotal for achieving SDG 4. Global and national reports highlight that inequities in FLN are strongly correlated with gender, location, and socioeconomic status, with marginalised groups facing overlapping disadvantages of lack of access and poor quality.^{18,19} The 2022 Annual Status of Education Report (ASER) showed persistent learning gaps, with over 50 percent of Grade 5 students in India unable to read a Grade 2 text, a figure much worse in rural and government schools.²⁰ These disparities reinforce intergenerational cycles of poverty and exclusion, as children lacking FLN skills are more likely to drop out and less likely to access decent work.

Although India has witnessed improvements in school enrolment in recent years, it continues to grapple with pronounced regional disparities in learning outcomes. ASER 2023 also pointed out stark regional disparities: states such as Kerala and Himachal Pradesh lead in literacy and skill acquisition, while others like Jharkhand and Bihar lag behind. Socioeconomic factors exacerbated these gaps, with children from low-income and marginalised families having less access to quality schooling, digital resources, and skilled teachers.²¹ Post-pandemic, ASER reported in 2024 a significant recovery from learning losses; however, the performance gap between the top- and bottom-performing states had widened between 2022 and 2024.²²

Setting the Context

Regional gaps are again evident from PARAKH Rashtriya Sarvekshan 2024, which represents India's first post-pandemic large-scale national learning assessment. Covering over 2.3 million students across 88,000 schools in India, PARAKH assessed performance in Language, Mathematics, Science, and Social Science at Grades 3, 6, and 9.²³ The survey tested a full range of grade-level competencies, mapped to NCERT curricular expectations, standardised scores from 60+ different boards,^b and promoted uniform assessment norms nationwide.^{24,25} This brief relies on PARAKH findings (national and state reports), offering comparative analysis and highlighting disparities in grade 3. Using a descriptive analytical approach, it highlights rural–urban gaps and inter-district variations, especially in states with pronounced disparities.

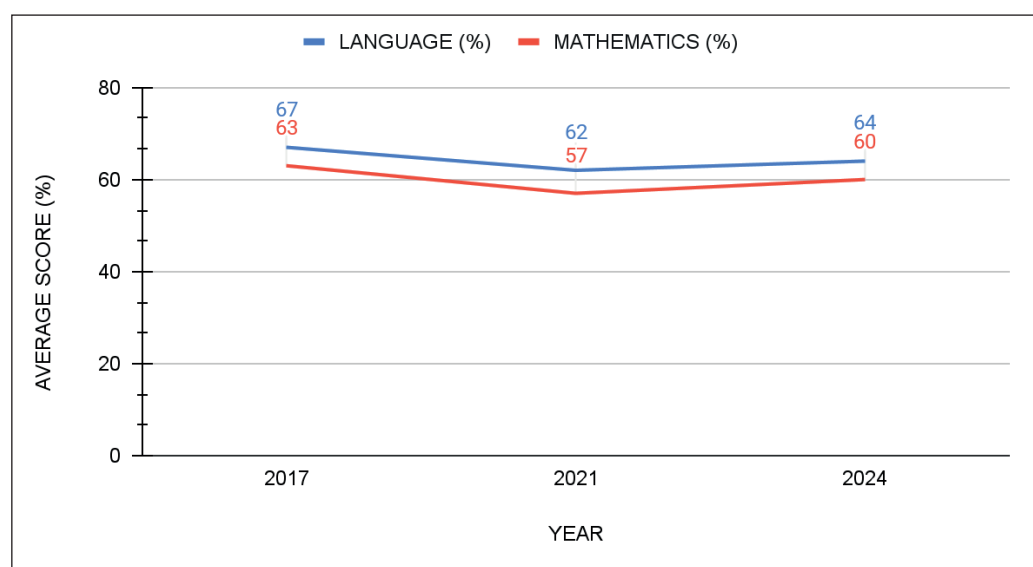
^b India has highly diverse and multiple school-board structures with national boards (CBSE, CISCE, NIOS), state secondary and higher secondary boards, open/alternate boards, and specialised boards (for Sanskrit or Islamic education). The PARAKH page on NCERT refers to 69 boards.

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

National and State Scores

For Grade 3, PARAKH assessed learning outcomes in two critical domains: Language (literacy) and Mathematics (numeracy). The average national scores stand at 64 percent in Language and 60 percent in Mathematics. This shows a slight improvement over scores from the National Achievement Survey (NAS) 2021, which were recorded as 62 percent and 57 percent, respectively. Yet, they fall behind the pre-pandemic 2017 NAS benchmarks at 68 percent and 64 percent (see Figure 2).^c This trajectory suggests that learning-loss mitigation efforts, while yielding some gains, have not yet closed the foundational gap created by prolonged school closures during the pandemic period, especially in early primary grades where self-guided learning is rare, and home support varies sharply by socio-economic status.

Figure 2: Change in National Performance (Language and Mathematics, 2017-2024)



Source: PARAKH 2024 Dashboard,²⁶ NAS 2021 National Report Card,²⁷ NAS 2017 National Report Card²⁸

^c While NAS 2017 and 2021 and PARAKH 2024 fall under the umbrella of large-scale national assessments, PARAKH has been conceptualised as a fresh baseline instrument, aligned with the new stage-wise competency framework of NEP 2020 and NCF-SE 2023. Therefore, comparisons with NAS data (which followed the earlier grade-based structure and different assessment design parameters) must be treated as indicative rather than strictly comparable trend data, with clear acknowledgement of the change in methodology, sampling frame, and competency scaling.

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

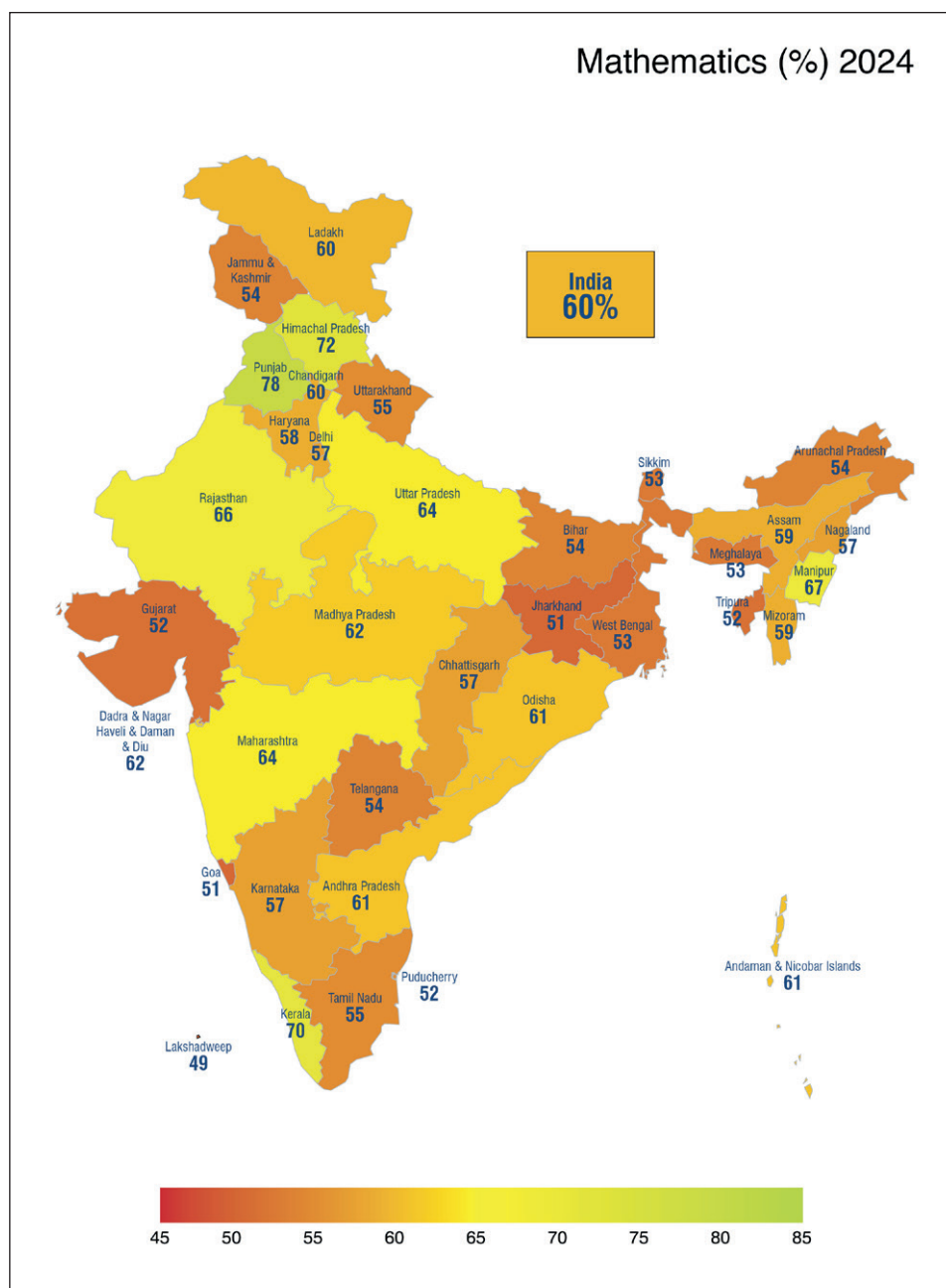
Across almost all states and districts, Mathematics scores lag behind Language, often by 3–7 percentage points, a pattern that holds regardless of overall performance level. Comparative data from 2017 to 2021 shows that in consonance with the global trend, pandemic learning losses were generally greater in Mathematics than in reading.²⁹ Across countries, this was perhaps due to the following reasons:

- i. The cumulative nature of mathematics learning that often relies on sequential knowledge building, so that interruptions disproportionately impact maths relative to language.³⁰
- ii. Greater vulnerability to socioeconomic disparities and home environment, as early grades require substantial instructional support. Therefore, challenges such as a lack of conducive home learning environments or parental literacy amplify foundational learning setbacks in mathematics.³¹
- iii. Prevalence of greater ‘math anxiety’ that limits informal practice outside classrooms, reducing math skill reinforcement and widening gaps.³²

PARAKH findings show that Punjab, Himachal Pradesh, Kerala, Manipur, and Rajasthan had the highest Grade 3 performance scores in Mathematics, while Lakshadweep, Jharkhand, Puducherry, Goa, and Tripura were at the bottom (see Figure 3). Uttar Pradesh at 64 percent also exceeded the national mathematics average of 60 percent. Overall, the report highlights a better North, with a weaker Northeast pattern (barring Manipur) in Mathematics. Western and central regions show mixed performance, with relatively better scores in Rajasthan and Madhya Pradesh.

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

Figure 3: Grade 3 Performance in Mathematics, 2024

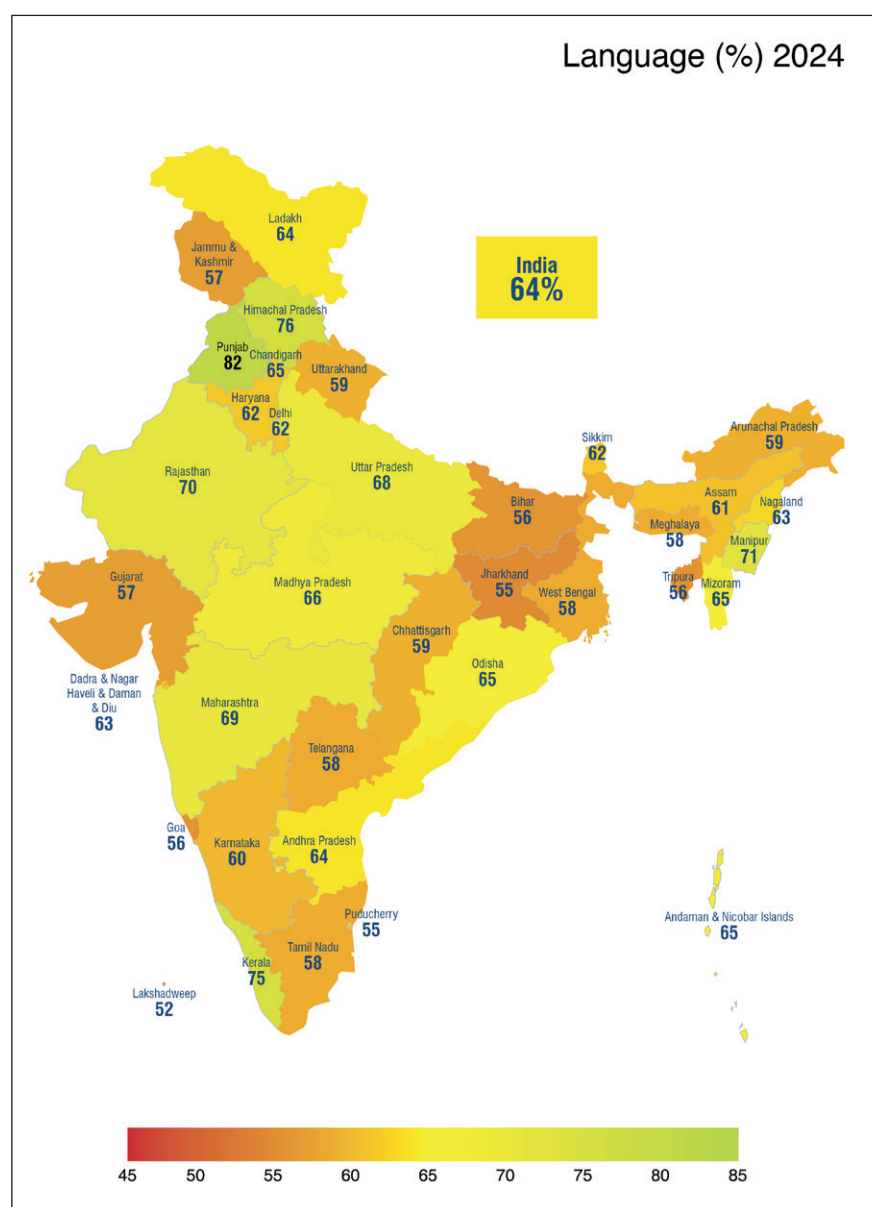


Source: Authors' own, created on MS Excel using data from the PARAKH 2024 Dashboard.³³

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

The state-wise scores in language proficiency, as given in Figure 4, range from about 52 percent to 82 percent. States like Punjab, Kerala, Haryana, Assam, and Goa performed well above the national average of 64 percent, whereas Bihar, Odisha, Jharkhand, Madhya Pradesh, and Rajasthan had significantly lower scores, indicating language learning challenges. Overall, PARAKH suggests that southern and some northern states score better, while central and some eastern states lag behind.

Figure 4: Grade 3 Performance in Language, 2024



Source: Authors' own, created on MS Excel using data from the PARAKH 2024 Dashboard.³⁴

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

The findings suggest a combined effect of strong school infrastructure, low teacher–pupil ratio, a historical baseline, and in some cases, targeted early-grade FLN interventions as part of NIPUN Bharat. For instance, states with prior investments in education, like Kerala and Punjab, exhibit faster gains, whereas large states with higher resource and access gaps, like Bihar and Madhya Pradesh, continue to lag. Improved performance from Uttar Pradesh can be linked to effectively implemented NIPUN Bharat Mission measures, particularly teacher-capacity building and real-time assessment and intervention tracking.³⁵

Trends in Select States

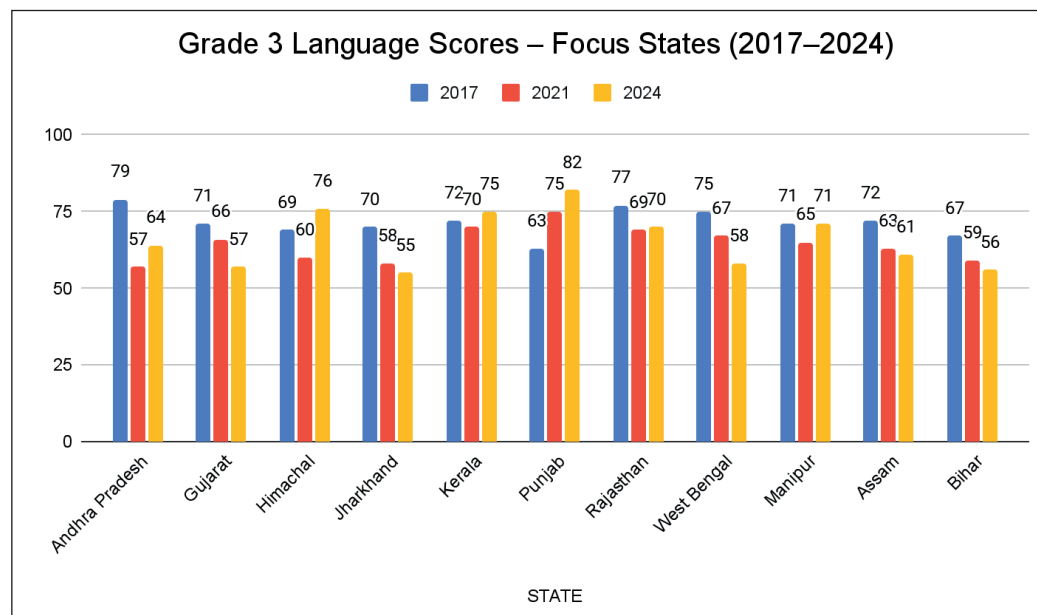
To enable a more focused and comparative analysis of trends over time for the set under discussion, this brief examines a subset of 11 states. The selection of these states is based on three criteria:

- i. Performance tier—to include both high-performing and low-performing states;
- ii. Regional diversity—to ensure representation across north, south, east, west, central, and northeast India; and
- iii. Comparability across time—with data from the National Achievement Survey (NAS) 2017, NAS 2021, and PARAKH 2024.

The high-performing states include Kerala, Punjab, and Himachal Pradesh, which consistently rank among the top national performers. Low-performing states such as Gujarat, Jharkhand, and Bihar are included to examine persistent challenges in foundational learning. For broader regional representation, West Bengal (east), Manipur and Assam (northeast), Rajasthan (west), and Andhra Pradesh (south) were included. Together, these states offer a balanced cross-section for assessing progress, setbacks, and regional variation in foundational literacy and numeracy over time. Given below are the performance scores of the selected states in NAS 2017, 2021 and PARAKH 2024.

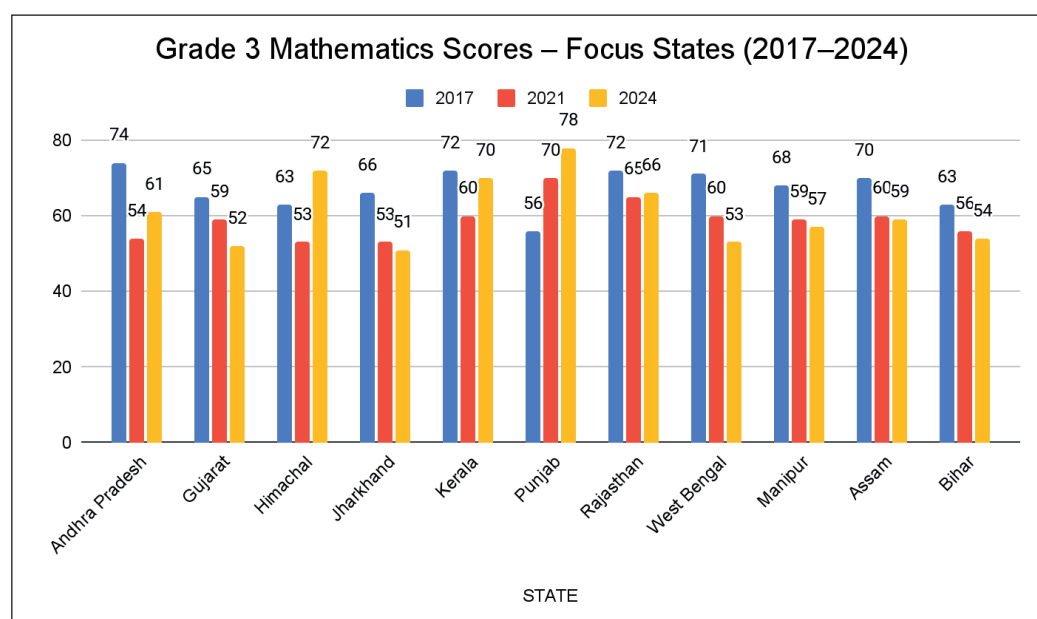
Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

Figure 5: Changes in Language Scores at a Foundation Level



Source: PARAKH 2024 Dashboard;³⁶ NAS 2021 National Report Card;³⁷ NAS 2017 National Report Card³⁸

Figure 6: Changes in Mathematics Scores at a Foundational Level



Source: PARAKH 2024 Dashboard;³⁹ NAS 2021 National Report Card;⁴⁰ NAS 2017 National Report Card⁴¹

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

Figures 5 and 6 show that states such as Punjab, Kerala, and Himachal Pradesh lead the national performance charts, each recording improvements over both 2017 and 2021 levels. Punjab's near-20-point rise since 2017 in both subjects stands out, with districts such as Barnala (92 percent in language and 92 percent in mathematics) and Gurdaspur (86 percent and 82 percent, respectively) outperforming the national and state averages. However, many populous states like Gujarat, Karnataka, and West Bengal have either stagnated or declined. Even when compared to NAS 2021, Bihar and Jharkhand both report slippages in FLN.

A district-level analysis reveals that all states, even the better performers, face internal disparities. In Punjab, while Barnala scored 92 percent in both Language and Mathematics, other districts like Moga (74 percent and 69 percent, respectively) and Patiala (80 percent and 75 percent) reflect a nearly 20-point spread within a top-performing state. Kerala's Ernakulam scores 85 percent in Language, while Wayanad lags at 67 percent, despite overall state strength. Maharashtra's Kolhapur (82 percent and 77 percent) contrasts with Latur (55 percent and 51 percent), demonstrating how state-level averages obscure sharp intra-state variation. Such disparities likely result from differential resource allocation, teacher quality, and local implementation of learning programmes.

Low-performing districts are often clustered in tribal and rural belts. In Jharkhand, Sahebganj (42 percent and 39 percent) and Pakur (47 percent and 44 percent) register among the lowest nationally. Andhra's Anantapur (52 percent and 50 percent) and Maharashtra's Gadchiroli (61 percent and 57 percent) reflect persistent foundational deficits. These geographies often combine infrastructural disadvantages with linguistic and socioeconomic marginalisation. Meanwhile, urban centres such as Mumbai Suburban (62 percent and 57 percent) and Delhi (62 percent and 57 percent) perform barely at par with national averages, suggesting that infrastructural access alone does not guarantee foundational proficiency. Students in state government schools outperformed those in private and urban schools, with rural children scoring higher than their urban peers in both language and mathematics, indicating successful implementation of the NIPUN Bharat Mission.

Three important conclusions can be made from the above examination of inter-state disparities:

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

First, even within high-performing states, the spread between best and worst districts could be in double digits, with disparities closely aligning with: a) uneven resource allocation (physical or digital infrastructure, trained teachers, and learning materials); b) sociolinguistic marginalisation (tribal belts); and c) varied implementation (discrepancies in how rigorously NIPUN Bharat and state FLN programmes are rolled out). This shows that contextual factors, including local governance capacity, management practices, monitoring, and community engagement, strongly influence foundational learning achievement in districts.⁴²

Second, does the urban paradox – Mumbai Suburban and Delhi’s near-average scores despite infrastructural access – indicate that proximity to resources is insufficient if effective learning environments, pedagogical quality, and teacher effectiveness remain weak?⁴³

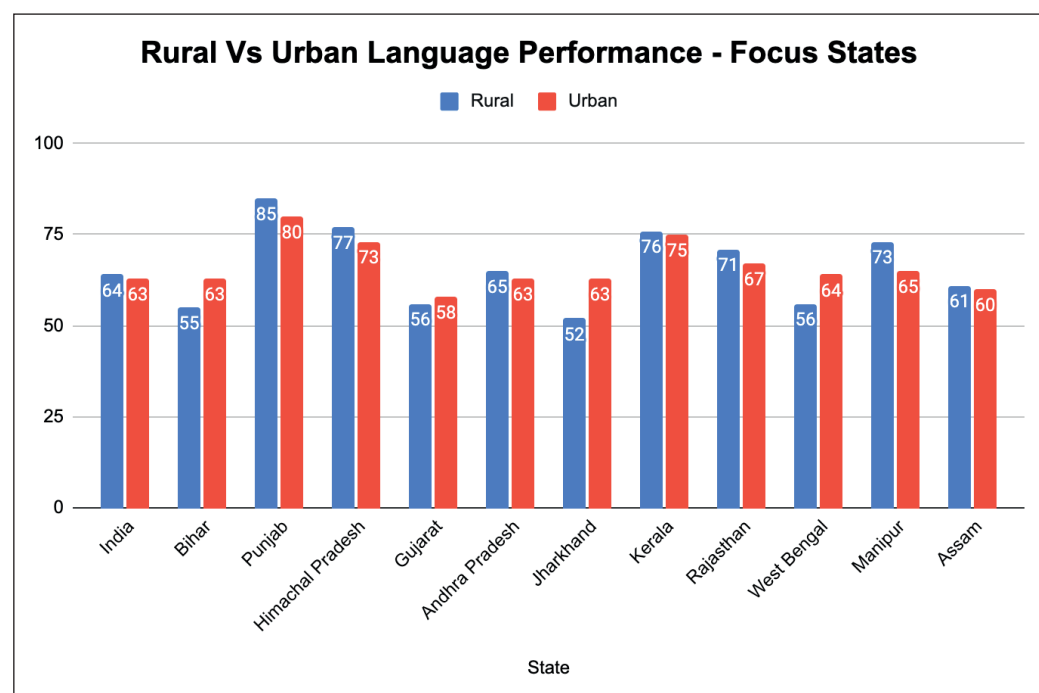
Third, the key policy takeaway is the need for district-level targeting rather than uniform statewide reforms. State-level averages can conceal deep intra-state disparities where some districts, like tribal-populated or geographically isolated ones, require targeted interventions such as strengthening mother-tongue early-grade instruction and locally contextualised learning materials to reduce language barriers to learning.⁴⁴ In such contexts, blanket pedagogical reforms or generic teacher-training modules will fail to yield impact because they do not respond to local linguistic ecologies and cultural learning contexts. Targeted interventions such as strengthening mother-tongue or home-language-based instruction in early grades, developing locally contextualised learning materials, and recruiting or training teachers who are linguistically and culturally aligned to the region could lead to much higher learning gains than standardised, one-size-fits-all reform packages.

Urban–Rural Disparities in Learning Outcomes

PARAKH data reveals a shifting pattern in learning outcomes between rural and urban students. At Grade 3, rural students marginally outperform their urban counterparts, scoring 64 percent in Language and 60 percent in Mathematics. Comparatively, the urban averages are 63 percent and 59 percent, respectively. This trend is visible in multiple states such as Punjab, Rajasthan, Maharashtra and Andhra Pradesh (see Figures 7 and 8). However, Bihar, Gujarat, Jharkhand and West Bengal diverge, where urban students outperform rural peers by 8 percentage points in language and 6 points in mathematics.

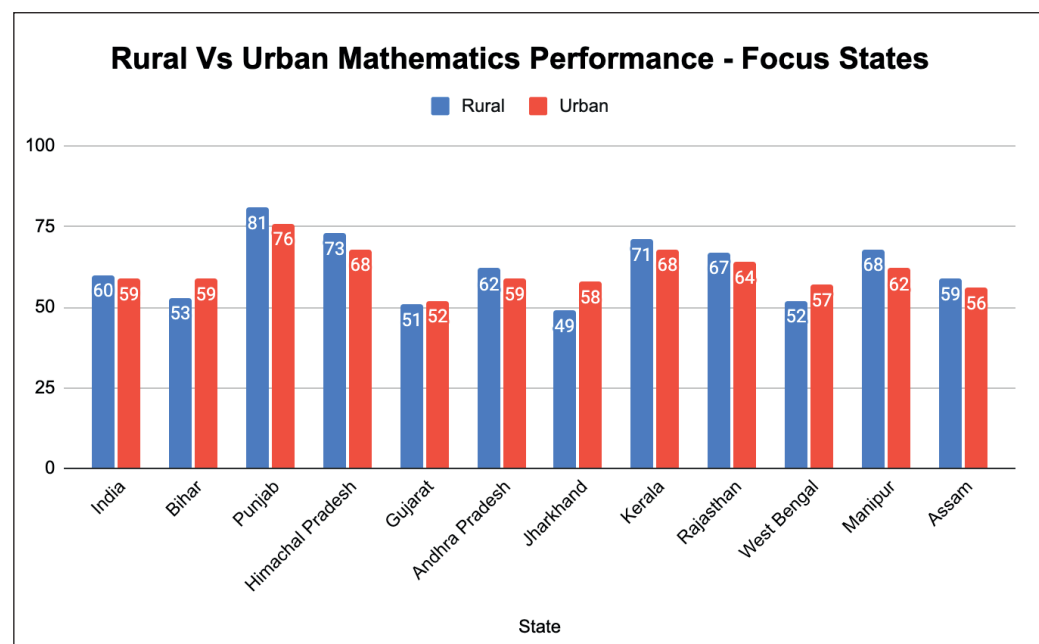
Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

Figure 7: Urban vs. Rural Scores in Language



Source: PARAKH 2024 Dashboard⁴⁵

Figure 8: Urban vs. Rural Scores in Mathematics



Source: PARAKH 2024 Dashboard⁴⁶

Key Findings: Regional Trends in Learning Outcomes for Foundational Learning (Grade 3)

A plausible explanation could be that rural students in early grades may have benefitted from instruction in their home language, leading to stronger initial literacy acquisition, compared to urban peers in linguistically diverse classrooms.⁴⁷

Since PARAKH does not directly capture language practices at the classroom level, however, this remains a hypothesis rather than an established causal link. A focused research agenda should correlate PARAKH learning outcomes with district-level LOI (language of instruction) implementation patterns and teacher language practices to empirically validate this relationship.

The pattern, however, reverses in later Grades 6 and 9, as early rural advantage erodes by upper primary and secondary levels. Urban areas gain a relative advantage over time, likely due to differences in teacher subject specialisation, academic support, and infrastructure, as well as the eroding focus of NIPUN from early grades in government schools. This reversal echoes insights from UNESCO (2023) that early learning parity does not guarantee sustained equity without continuous investment in teacher capacity, curriculum progression, and targeted support for rural learners in higher grades.⁴⁸

However, states like Punjab demonstrate that rural systems can outperform when adequately resourced and supported, challenging the presumption of inherent urban advantage and pointing to the role of governance and localised implementation in ensuring equitable learning outcomes. Overall, PARAKH shows that educational outcomes in rural India vary widely, influenced not only by state policies but also by geography, infrastructure, social conditions, and the local economy. For example, states with more accessible and better-serviced rural areas tend to show stronger performance, while very remote or underdeveloped rural regions often face challenges like teacher shortages, infrastructure gaps, and poorer health or nutrition indicators that affect learning.

PARAKH 2024 presents a nuanced picture: recovery efforts, including NIPUN Bharat literacy-numeracy campaigns, have helped in post-pandemic recovery but have not fully closed learning gaps. State-level performance and regional patterns indicate a general deficit in east, northeast, and central states. However, even high-achieving states show pronounced district-level differences. Improved rural performance at a foundational stage suggests effective rural interventions under NIPUN Bharat; however, the achievements are eroded in the higher grades. Moreover, a state or district that is labelled as ‘above average’ might still have a high proportion – 30 percent to 35 percent – of children struggling with FLN. Furthering learning outcomes will require multipronged interventions at various levels: national, state, and district. Accordingly, a list of suggested key strategies for action is given below:

National-Level Recommendations

- **Mandate a National Foundational Numeracy Remediation Programme:** Launch a centrally funded, six-to-eight-week intensive summer remedial ‘Math Mauj’ curriculum for students in Grades 1–3. It can be implemented as a mandatory programme in all schools across states and union territories.

This programme should provide scripted lesson plans, supplementary workbooks, and video tutorials covering core numeracy concepts, available in all major Indian languages. DIETs (District Institutes of Education and Training) and SCERTs (State Councils of Educational Research and Training) can train 50,000 master trainers to cascade training to every teacher effectively. Digital tools like the NIPUN Mentor app can be used for real-time monitoring of student progress, attendance, and support needs.

- **Integrate PARAKH Dashboards into UDISE+** (Unified District Information System for Education Plus): Pilot tests for phased integration of PARAKH grade-wise performance data as an add-on module within UDISE+ for select districts to test technical compatibility, data flow, dashboard usability, and alert effectiveness can be undertaken. Data can be uploaded quarterly, and automated alerts can be set up when a district’s language or math proficiency falls more than 5 points below the state average, supporting real-time corrective action plans. This will be helpful in reducing intra-state disparities.

- **Make Performance Grants for SCERT/DIET Conditional, Based on Foundational Outcomes:** Linking a portion (suggested 20 percent) of SCERT/DIET annual grants to learning benchmarks should be explored. Benchmarks may not be uniform but must be linked to their state baseline and improvement goals. This is important to incentivise state training institutions to prioritise school-level pedagogy, remedial strategies, and teacher trainings, and thereby address the national stagnation of performance since NAS 2017. However, it must be piloted in three to five states with varying baselines (e.g., Kerala as high, Rajasthan as mid, Jharkhand as low) so as to refine benchmarks, develop monitoring frameworks, and provide contextual adaptation before national scale-up. SCERTs should also take up the Foundational Learning Study (FLS) to gain concrete insights into FLN indicators in their states, enabling them to identify what interventions work best for improving early-grade learning outcomes.

State-Specific and Zonal Recommendations

- **Institutionalise Cross-District Learning Collaboratives:** To address intra-state disparities in educational outcomes, states should facilitate structured cross-learning mechanisms among districts. High-performing districts can serve as hubs for peer mentorship for underperforming ones through:
 - a) Inter-district teacher exchange programmes, enabling educators from lagging regions to experience effective pedagogical practices first-hand;
 - b) Joint capacity-building workshops, where district education officers (DEOs) and principals collaboratively discuss and strategise to tackle shared challenges like dropout reduction, learning recovery, or inclusive classroom practices;
 - c) Thematic learning collaboratives focused on specific areas such as digital integration, language proficiency, or community engagement can be organised for districts to share ideas, co-develop action plans, and track peer progress.

Such horizontal intra-state exchanges can accelerate policy diffusion, expand access to innovations, and foster a culture of cooperative improvement, moving away from a top-down compliance model to a peer-enabled ecosystem of learning.

Strategies for Action

- **Leverage Underutilised District Infrastructure as Community Learning Hubs:** Identify underused local spaces such as vacant government buildings, unused classrooms, training centres, or panchayat halls and leverage them as multi-functional learning hubs. They could be used to host teacher training and peer learning sessions, run weekend or after-school programmes, and facilitate inter-district knowledge exchanges and community engagement programmes like parenting workshops, reading clubs, or skill-building activities tied to local livelihoods.

For this, SCERT/DIETs can partner with district administration to identify two or three such spaces per district and equip them with modular furniture, offline digital content, and training facilities. They can be linked with PM SHRI and Samagra Shiksha budgets for maintenance and staffing.

- **Strengthen Mother-Tongue FLN Initiatives in Schools in Tribal Belts:** To strengthen FLN outcomes in tribal-majority districts, the focus should be on strengthening and expanding programmes that develop and deliver culturally grounded early-grade learning content. These can include storybooks, activity kits, and digital modules. State SCERTs can collaborate with tribal welfare departments and grassroots non-governmental organisations (e.g., Ekalavya and PRIA) to co-create audio-visual and print materials tailored to local dialects and contexts. Offline digital content like interactive storybooks, games, and phonics apps can be loaded on school tablets and used for Grades 1 to 3. DIETs and Block Resource Centres can host teacher orientation camps on bilingual pedagogy and oral language development.
- **Scale Public–Private Partnerships for Early Literacy:** States should catalyse a scalable model for hybrid public–private partnerships to strengthen early literacy through offline-first, multilingual, and child-friendly EdTech content. These can be deployed in classrooms, *anganwadis*, and community-based settings. Several such models already exist: Andhra Pradesh has partnered with Pratham’s “Read India” programme, and Karnataka uses EkStep’s “Sunbird” platform to power foundational learning apps on teacher tablets with open-access learning paths in Kannada and English. These must be strengthened, continued, and adopted across states, where state SCERTs can sign MoUs with non-profits for partnerships and co-deploy curated content in alignment with NIPUN Bharat goals. These partnerships can ensure high-quality, contextualised FLN resources for children in low-resource areas through partnerships that accelerate learning recovery and allow for multilingual, multimodal literacy delivery.

- **Integrate Bal Vatika^d-style early learning classrooms (for ages 4–5) under the Ministry of Education (MoE):** Bal Vatika-style early learning classrooms should be put under the MoE and state education departments, while Women and Child Development Ministry continues to manage anganwadis for younger children (0–4 years). Currently, some states have *bal-vatikas*, but it is not a nationwide uniform system. For this age group, structured KG-like classrooms within schools will provide a smoother transition to formal education and better learning outcomes. A standardised early learning curriculum with teacher training modules specifically for Bal-Vatika classrooms, focused on play-based, interactive learning, and a low student–teacher ratio, must be implemented. This reduces the burden on anganwadis while ensuring that children entering formal schooling are school-ready and promotes coherent early learning pathways under the education system, strengthening both learning outcomes and equity.

Specific Recommendations for Rural Areas

- **Village-Based Mobile Learning Labs (‘Edu-On-Wheels’):** Solar-powered devices equipped with screens, educational materials in local dialects, digital tools, and tracking systems are already operational in some areas of India. Led by civil society or private initiatives, they visit clusters of five to seven villages on fixed schedules, offering ‘bridge schooling’. Such programmes should be adapted and scaled up nationwide, with the following features:
 1. Support off-grid learning;
 2. Provide pre-loaded, digital content in the local language;
 3. Have rotating, scheduled community stops and a pre-planned timetable;
 4. Involve local teachers or DEOs for community engagement and follow-ups;
 5. Emphasise addressing arithmetic, science, and language competencies.

^d Loosely translated as Kindergarten or early learning classrooms

- **Community Math Mentors in Gram Panchayats:** Local youth with a minimum of Grade 12 math proficiency can be trained as para-teachers for after-school numeracy clubs. Block Education Officers can provide them training in pedagogy. Their attendance and progress could be tracked through simple mobile tools integrated with UDISE+, and they can be given a modest honorarium. These Math Mentors can provide targeted, culturally attuned numeracy support at low cost. Measures must be undertaken to ensure mentor quality. A clear pathway for high-performing mentors to enter formal teacher-training programmes (through scholarships) can provide them meaningful incentives and also build a pipeline to teacher recruitment.

Recommendations for Further PARAKH Investigation

- **Longitudinal Study of Learning Recovery Trajectories:** PARAKH should track a cohort of sample districts, particularly low performers across states, over three years, to map real-time recovery in language and mathematics. Unique IDs can be used to administer PARAKH micro-assessments every six months and correlate recovery patterns with contextual variables like school infrastructure, teacher attendance, home support, and EdTech usage. Robust guidelines must be developed to minimise challenges like administrative coordination, cohort management and data governance. It is also essential to ring-fence resources so that PARAKH's core survey work remains uncompromised. PARAKH should also recommend FLS that are geared to providing more concrete foundational learning insights.
- **Use Background Disaggregation for Targeted Approach:** PARAKH already collects socioeconomic and language data and actively emphasises their use to tailor educational strategies and policies for targeted interventions across India's diverse school ecosystem. However, we are yet to see how exactly this is utilised or targeted into policy actions. It is recommended that this disaggregated data be used to generate insights on equity in learning outcomes and that this is shared with stakeholders – down to the school level – to analyse learning gaps and formulate action plans. 

Arpan Tulsyan is Senior Fellow, Centre for New Economic Diplomacy (CNED), ORF.

Ishika Rajan is Intern, Centre for New Economic Diplomacy (CNED), ORF.

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20, Rouse Avenue Institutional Area,
New Delhi - 110 002, INDIA
Ph. : +91-11-35332000. Fax : +91-11-35332005
E-mail: contactus@orfonline.org
Website: www.orfonline.org