

Impact Assessment of National Education Initiatives on Learning Outcomes and Educational Quality

Rajiv Kumar Bakshi¹ and Dr. V K Sharma²

¹Research Scholar, Department of Education

²Research Guide, Department of Education

Mind Power University, Bhimtal, Nainital

Abstract: *This paper examines the impact of India's National Education Policy (NEP) 2020 and its associated initiatives on learning outcomes and educational quality across the school and higher education sectors. Drawing on data from PARAKH Rashtriya Sarvekshan 2024, the Unified District Information System for Education Plus (UDISE+), and the Annual Status of Education Report (ASER), the analysis reveals measurable progress in foundational literacy and numeracy, enrolment expansion, and gender equity. The National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat) has contributed to significant learning gains, with the share of Grade 3 children able to read Grade 2 level texts rising from 24% to 34% in Uttar Pradesh between 2022 and 2024. However, persistent regional disparities, mathematics achievement gaps, and implementation challenges—including resource constraints, administrative hurdles, and political resistance—continue to constrain the policy's transformative potential. The paper concludes that while NEP 2020 has catalysed systemic reform and demonstrated that rapid learning gains are achievable at scale, sustained political commitment, targeted interventions for lagging regions, and continued investment in the instructional core are essential for fulfilling its ambitious vision.*

Keywords: National Education Policy, learning outcomes, foundational literacy and numeracy, educational quality, NIPUN Bharat, PARAKH, India

I. INTRODUCTION

The National Education Policy (NEP) 2020 represents a landmark reform in India's educational landscape, marking the first comprehensive overhaul of the country's education system in 34 years. Developed after extensive consultations with educators, students, and policymakers, the policy aims to transform India's education system by making it more flexible, multidisciplinary, and rooted in Indian values while aligning with global educational standards. The policy rests on foundational principles including competency-based progression, holistic development, and the integration of technology in education.

The Indian education system has historically faced significant challenges: inadequate infrastructure, teacher shortages, wide disparities in educational outcomes across different socio-economic groups, and persistent learning deficits. The COVID-19 pandemic further exacerbated these challenges, resulting in unprecedented disruptions to schooling and a worsening of foundational learning deficits. In this context, NEP 2020's ambitious goals—including universal foundational literacy and numeracy, learner-centred pedagogy, reforms in teacher training, and leveraging technology to narrow learning gaps—assume critical importance.

This paper assesses the impact of NEP 2020 and its associated initiatives on learning outcomes and educational quality. Drawing on large-scale assessment data, official statistics, and scholarly analyses, it examines progress across foundational learning, enrolment and retention, teacher development, and regional equity. The analysis also identifies persistent challenges and offers recommendations for deepening and sustaining the gains achieved.

II. LITERATURE REVIEW

2.1 Historical Context of Educational Reform in India

The Indian education system has evolved through various socio-political transformations. Historically, education in India was predominantly religious and holistic, with the Gurukul system emphasising oral transmission of knowledge and overall individual development. However, the advent of British colonial rule introduced Western education, shifting the focus towards a curriculum centred on European knowledge and English as the medium of instruction—a change that, while providing new opportunities, also marginalised indigenous knowledge systems.

Post-independence, the Indian government formulated various education policies, starting with the National Policy on Education (NPE) in 1968, which emphasised the promotion of regional languages and a common educational structure. The subsequent NPE of 1986 further advanced universal education and aimed to address disparities in access. Despite these efforts, the system continued to face challenges including inadequate infrastructure, teacher shortages, and wide disparities in educational outcomes.

2.2 NEP 2020: Key Provisions and Innovations

NEP 2020 introduces several transformative changes across school and higher education. In school education, key initiatives include the alignment of Samagra Shiksha with the NEP; the launch of NIPUN Bharat for ensuring foundational literacy and numeracy by Grade 3; the introduction of the 5+3+3+4 curricular structure aligned with developmental stages; the establishment of PARAKH as India's National Assessment Centre; and the PM e-VIDYA initiative to unify digital education efforts.

The policy also emphasises the establishment of PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development) as India's National Assessment Centre. Paragraph 4.41 of NEP 2020 proposed PARAKH to develop norms, standards, and guidelines for student assessment, conduct large-scale surveys, and promote assessment practices aligned with 21st-century learning goals.

2.3 Assessment Frameworks: NAS, PARAKH, and Holistic Progress Cards

The National Achievement Survey (NAS), first introduced by the Ministry of Education in collaboration with NCERT in 2001, has evolved as a critical tool for assessing students' learning outcomes across varied contexts. A major shift occurred in 2017 when the survey made district-level estimates available, moving beyond state-level aggregates.

PARAKH Rashtriya Sarvekshan 2024, the first post-pandemic large-scale national learning assessment, covered over 21.15 lakh students across 74,229 schools in 781 districts, assessing performance in Language, Mathematics, Science, and Social Science at Grades 3, 6, and 9. The survey tested grade-level competencies mapped to NCERT curricular expectations, standardised scores across different boards, and promoted uniform assessment norms nationwide.

The Holistic Progress Card (HPC) developed by PARAKH-NCERT represents a practical response to the vision of NEP 2020. Moving beyond marks-based assessment, the HPC provides a comprehensive system for reporting learners' progress across domains, curricular goals, competencies, and learning standards. It emphasises formative assessment (70% formative, 30% summative) and incorporates self-assessment, peer assessment, and parent observation.

III. METHODOLOGY

This impact assessment employs a mixed-methods approach combining quantitative analysis of large-scale assessment data with qualitative synthesis of policy documents and scholarly literature.

3.1 Data Sources

The analysis draws on multiple data sources:

1. **PARAKH Rashtriya Sarvekshan 2024:** National, state, and district-level data on competency development at Grades 3, 6, and 9, covering 2.3 million students from 88,000 schools.
2. **UDISE+ (Unified District Information System for Education Plus):** Data on school enrolment, infrastructure, and dropout rates across nearly 14.72 lakh schools and approximately 24.8 crore students.

3. **Annual Status of Education Report (ASER):** Trend data on foundational reading and arithmetic skills.
4. **Official Policy Documents:** Government reports, parliamentary answers, and ministry publications.
5. **Scholarly Literature:** Peer-reviewed analyses of NEP 2020 implementation and impact .

3.2 Analytical Framework

The analysis is structured around four domains of impact assessment:

1. **Foundational Learning Outcomes:** Progress in literacy and numeracy at early grades (primarily Grade 3).
2. **Enrolment, Retention, and Access:** Trends in student enrolment, dropout rates, and equity indicators.
3. **Systemic Reform and Institutional Change:** Implementation of curricular reforms, assessment transformation, and teacher development.
4. **Regional and Social Equity:** Disparities in learning outcomes across states, rural-urban divides, and socio-economic groups.

IV. FINDINGS

4.1 Foundational Literacy and Numeracy: Measurable Progress

The impact assessment reveals significant progress in foundational learning outcomes since the launch of NIPUN Bharat in 2021. In the state of Uttar Pradesh, the share of Grade 3 children able to read a Grade 2 level text rose from 24% in 2022 to 34% in 2024, reflecting a remarkable achievement within one political cycle .

Nationally, PARAKH Rashtriya Sarvekshan 2024 recorded average scores of 64% in Language and 60% in Mathematics for Grade 3. While these scores show slight improvement over NAS 2021 (62% and 57%, respectively), they remain below pre-pandemic NAS 2017 benchmarks (68% and 64%) . Grade 3 data from PARAKH 2024 also show that government schools now outperform private schools in several states, indicating that the focus on the most remote classrooms is yielding dividends .

However, significant gaps persist. Only 55% of Class 3 students can arrange numbers up to 99 in ascending or descending order, and only 53% in Class 6 know tables up to 10 . Students scored lowest in mathematics (46% nationally), while in language they averaged 57% and in 'The World Around Us' scored 49% . Across almost all states and districts, mathematics scores lag behind language, often by 3-7 percentage points .

4.2 Enrolment and Retention: Systemic Gains

UDISE+ data indicate substantial improvements in school education indicators between 2014-15 and 2023-24. The number of teachers increased from 85.6 lakh to 98.07 lakh, with female teachers rising from 40.2 lakh to 52.3 lakh, reflecting a more gender-balanced workforce. Dropout rates declined significantly: primary level from 4.5% (2018-19) to 1.9%, upper primary from 4.7% to 5.2%, and secondary from 17.9% to 14.1% .

The mean years of schooling increased from 6.28 to 7.33 years, and the expected years of schooling from 11.75 to 13.36 years, while the youth literacy rate climbed from 94.6% to 97% .

In higher education, enrolment increased by 30% since 2014-15, reaching 4.46 crore. Notably, SC student enrolment rose by 50.1%, ST enrolment by 75%, and Muslim student enrolment grew by 46.3% . Female PhD enrolment increased by 135.6%, from 48,000 to 1.12 lakh .

4.3 Regional Disparities: A Persistent Challenge

Despite national progress, significant regional disparities in learning outcomes persist. PARAKH 2024 reveals that Punjab, Himachal Pradesh, Kerala, Manipur, and Rajasthan achieved the highest Grade 3 performance scores in Mathematics, while Lakshadweep, Jharkhand, Puducherry, Goa, and Tripura were at the bottom .

The PARAKH survey also identified a significant rural-urban divide. While Class 3 students in rural areas performed better in both mathematics and language, children in Classes 6 and 9 in urban areas outperformed their rural counterparts across all subjects . This pattern suggests that rural foundational learning interventions (such as NIPUN

Bharat) may be yielding early gains, but these advantages do not yet translate into sustained performance at higher grades.

4.4 Systemic Reforms: Policy Implementation and Institutional Change

The policy has catalysed substantial institutional and pedagogical transformation. As of 2024, more than 1.1 crore children are enrolled in Balvatikas (pre-school), up from 50 lakh in 2018, reflecting the integration of pre-school into the '5+3+3+4' structure. Over 4.2 crore students across 8.9 lakh schools have participated in Vidya Pravesh, a 12-week play-based module for Grade 1 readiness.

More than 14 lakh teachers have been trained under the NISHTHA foundational programme. The 'Jaadui Pitara'—a multilingual play-based teaching kit—has been distributed in 22 Indian languages.

The Holistic Progress Card, developed by PARAKH-NCERT, represents a fundamental shift from assessment of learning to assessment for learning. The HPC incorporates self-assessment, peer assessment, and parent observation, creating a 360-degree view of learner progress. It emphasises formative assessment with a 70% formative and 30% summative evaluation balance.

4.5 Higher Education and Research: Global Recognition

NEP 2020's focus on research and innovation has propelled India's ranking in the Global Innovation Index from 81 in 2015 to 38 in 2025. India ranks 3rd in terms of number of PhDs awarded in Science and Engineering and 3rd in total Science and Engineering publications (2022).

Indian higher education institutions have achieved improved international rankings: 54 Indian HEIs are ranked in QS 2026, compared to 28 in QS 2021, with 10 institutions in the top 500. Internationalisation efforts have resulted in Letters of Intent issued to 11 foreign universities to establish offshore campuses in India, while Indian institutions like IIT Madras (Zanzibar) and IIT Delhi (Abu Dhabi) are expanding globally.

V. DISCUSSION

5.1 The NIPUN Bharat Model: Evidence of Effectiveness

India's experience demonstrates that with political commitment, clear targets, evidence-based materials, and consistent data use, learning gains are achievable rapidly and at scale. The NIPUN Bharat mission's success rests on several mutually reinforcing elements: political leadership that translates ambition into accountability; delivery infrastructure with project management units at every level; structured pedagogy with lesson plans, workbooks, and one-to-one textbooks in languages children understand; and data for decision-making complemented by digital tools for teachers and coaches.

The improvement in government school performance relative to private schools is particularly noteworthy. This suggests that targeted investment in the instructional core—teaching guides, lesson plans, and workbooks—coupled with strengthened delivery capacity, can reverse longstanding patterns of inequality.

5.2 Implementation Challenges and Constraints

Despite these gains, implementation challenges persist. As noted in scholarly analysis, NEP 2020 faces resource constraints, administrative hurdles, and resistance to change. Political resistance from some opposition-ruled states, with concerns over centralisation and language, has constrained uniform implementation.

The transformation of single-discipline institutions has lagged; though 35 universities have received significant funding under PM-Usha, many engineering and teacher education colleges are yet to realign. Gaps in faculty development, curriculum design, and infrastructure persist. While 153 universities offer multiple entry options, only about 31,000 undergraduates and 5,500 postgraduates have used these options, suggesting that structural reforms are outpacing student uptake.

Persistent learning gaps—particularly in mathematics and in specific regions—highlight the need for focused interventions. As the ORF analysis notes, "These learning gaps highlight the need for focused interventions to strengthen students' skills, refine instructional strategies, and provide additional learning support".

5.3 The Role of Assessment in Driving Quality

The evolution of assessment frameworks—from NAS to PARAKH—represents a critical lever for quality improvement. The availability of district-level estimates from 2017 onwards enabled more targeted interventions. PARAKH's role in standardising assessment norms across states and boards, combined with the Holistic Progress Card's emphasis on formative, competency-based assessment, aligns with the NEP's vision of education as a transformative process.

The PARAKH Rashtriya Sarvekshan 2024's coverage of 21.15 lakh students and 2.70 lakh teachers across 74,229 schools from 781 districts, with 63% of students from rural areas, ensures strong and inclusive representation. However, as education secretary Sanjay Kumar noted, the next phase must focus on translating findings into meaningful actions through workshops and district-specific roadmaps.

5.4 Future Directions: Sustaining and Deepening Reform

India's progress is impressive, but the work is not done. The next phase will focus on sustaining NIPUN Bharat beyond 2026-27, ensuring every child masters foundational skills through targeted interventions in Grades 3-5 and effective use of teaching guides through coaching. Addressing persistent challenges such as multigrade and multilingual classrooms will be critical to ensuring equity and lasting gains.

Ongoing independent evaluation will be essential. Allahabad University's ICSSR-funded project to assess NEP implementation across eight states, with a focus on the Panchakosha model of holistic education, will generate empirical insights on practical application of reforms—including outcome-based learning, digital integration, and inclusivity. Such independent assessments complement government monitoring and provide crucial feedback for policy refinement.

VI. CONCLUSION

This impact assessment finds that India's National Education Policy 2020 and associated initiatives have catalysed measurable improvements in learning outcomes and educational quality. The NIPUN Bharat mission has demonstrated that rapid, systemic gains in foundational literacy and numeracy are achievable, with significant improvements in reading proficiency across states. Enrolment has expanded substantially, dropout rates have declined, and higher education access has become more inclusive across gender, caste, and minority groups. India's global research and innovation rankings have improved, and higher education institutions are gaining international recognition.

However, the evidence also reveals persistent challenges. Regional disparities in learning outcomes remain pronounced, with states and districts at varying levels of performance. Mathematics achievement lags significantly behind language, and the pre-pandemic performance levels in foundational learning have not yet been fully recovered. Implementation challenges—including resource constraints, political resistance, and the gap between structural reforms and institutional uptake—continue to constrain the policy's transformative potential.

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