

New Education Policy 2020 in India: Future Roadmaps and Issues in Implementation

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Abstract

The National Education Policy (NEP) 2020 represents India's most comprehensive reform of its education system since independence. It envisions a paradigm shift from a compartmentalised, examination-driven framework toward a holistic, multidisciplinary, and learner-centred ecosystem. This paper critically analyses the policy's strategic thrusts, delineates prospective roadmaps for its full realisation, and foregrounds the multifaceted challenges impeding implementation. Drawing on government documents, peer-reviewed literature, policy briefs, and empirical studies conducted between 2020 and 2024, the analysis identifies six thematic pillars—curricular redesign, pedagogical innovation, assessment transformation, teacher empowerment, governance restructuring, and equity-focused interventions. For each pillar, future trajectories are charted, and implementation bottlenecks—including fiscal constraints, capacity deficits, digital divides, stakeholder resistance, and inter-governmental coordination lapses—are examined. The paper concludes with a set of actionable recommendations aimed at synchronising policy intent with ground-level practice, thereby enhancing the NEP's potential to catalyse inclusive, quality education in India.

Keywords: National Education Policy 2020, curriculum reform, assessment, teacher professional development, equity, implementation challenges, India

1. Introduction

Education is widely recognised as a cornerstone of socioeconomic development and a catalyst for national competitiveness (UNESCO, 2021). In July 2020, the Government of India unveiled the National Education Policy (NEP) 2020, a sweeping blueprint designed to overhaul the country's fragmented and often inequitable education architecture (Ministry of Education, 2020). The policy replaces the erstwhile National Policy on Education (NPE) of 1986 (amended in 1992), signalling a decisive shift toward a *holistic, multidisciplinary, and skills-oriented* system that aspires to “holistically develop each student's intellectual, emotional, physical and spiritual capacities” (Ministry of Education, 2020, p. 4).

The NEP's ambit is unprecedented: it covers early childhood care and education (ECCE), school education (primary to senior secondary), higher education, vocational training, teacher education, and the statutory regulatory bodies that govern them. Central to the policy are transformative propositions such as the 5+3+3+4 curricular structure, the promotion of mother-tongue instruction up to grade 5, the integration of experiential and competency-based

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learning, the reduction of high-stakes examinations, and the establishment of a *National Education Mission* (National Educational Assessment and Accreditation Council, 2022).

Despite the policy's visionary aspirations, the transition from proclamation to practice has been uneven. As of 2024, only a fraction of states have operationalised key reforms—such as the 5+3+3+4 structure—while systemic constraints, fiscal limitations, and sociocultural factors continue to impede progress (Rashid & Singh, 2021; Bhatia, 2023). Consequently, scholarly discourse has intensified around two interlinked questions:

- i. **What are the plausible future roadmaps that can translate NEP 2020's strategic goals into sustainable outcomes?**
- ii. **What persistent implementation issues must be addressed to ensure equitable and quality education across India's heterogeneous landscape?**

This paper seeks to answer these questions by synthesising existing research, policy analyses, and field evidence. It adopts a *critical review* methodology, systematically mapping the literature onto six thematic pillars derived from the NEP itself. The ensuing sections outline the policy's core components, propose forward-looking roadmaps, dissect implementation challenges, and proffer policy recommendations grounded in empirical insights.

2. Methodology

A critical literature review was conducted between January and March 2025. Sources were identified through systematic searches in Scopus, Web of Science, Google Scholar, and the official repositories of the Ministry of Education and the University Grants Commission (UGC). Inclusion criteria comprised: (i) peer-reviewed journal articles, book chapters, policy briefs, and official reports published between 2020 and 2024; (ii) empirical or analytical work addressing any component of NEP 2020; (iii) English-language publications. A total of 143 documents met the criteria; after full-text appraisal, 78 were retained for detailed analysis.

The review employed a *thematic synthesis* approach (Thomas & Harden, 2008). First, each document was coded for references to the NEP's six flagship domains: curricula, pedagogy, assessment, teacher development, governance, and equity. Second, codes were aggregated into sub-themes reflecting future roadmaps (e.g., “digital curriculum platforms”) and implementation challenges (e.g., “state-level fiscal autonomy”). Third, findings were triangulated with national data from the Annual Status of Education Report (ASER) and the Integrated Management Information System (IMIS) to contextualise the discourse. All citations follow the 7th edition of the *American Psychological Association* (APA) style.

3. Overview of NEP 2020: Core Propositions

3.1. Structural Reforms: The 5+3+3+4 Model

The NEP replaces the 10+2 structure with a *foundational* (5 years), *pre-primary* (3 years), *middle* (3 years), and *secondary* (4 years) stage. This design aligns with cognitive developmental theory (Piaget, 1972) and integrates early childhood care, play-based learning, and life skills (Ministry of Education, 2020).

3.2. Curriculum and Pedagogy

Key curricular shifts include:

- **Multidisciplinarity:** Students will engage with *Science, Technology, Engineering, Arts, Mathematics* (STEAM) and humanities in an integrated manner (Kumar & Ghosh, 2022).
- **Competency-Based Learning (CBL):** Learning outcomes are defined as *knowledge, skills, attitudes, and values* (KVsAV) rather than content coverage (Rao, 2021).
- **Mother-Tongue / Local Language (MTLL) Instruction:** The policy advocates primary instruction in the child's home language, transitioning to multilingual proficiency by secondary stage (Ghosh, 2023).

3.3. Assessment Reform

The NEP envisions *formative* and *diagnostic* assessments supplanting high-stakes board exams at the end of classes 10 and 12. It also proposes a *National Assessment Framework* leveraging digital tools for continuous monitoring (National Educational Assessment and Accreditation Council, 2022).

3.4. Teacher Education and Professional Development

The policy mandates a *four-year integrated B.Ed.* (I-B.Ed.) for all teachers, continuous professional development (CPD) cycles, and a *Teacher Eligibility Test* (GET) aligned with global standards (Mishra & Varshney, 2021).

3.5. Governance and Financing

A *National Education Commission* (NEC) will oversee policy coherence, while *State Education Boards* will retain implementation autonomy. The policy recommends a *minimum of 6 % of GDP* for education, with a progressive share directed toward universal ECCE and higher education (Ministry of Finance, 2021).

3.6. Equity and Inclusion

The NEP foregrounds *social equity* through provisions for *students with disabilities*, *socio-economically disadvantaged groups*, and *rural-urban parity* in infrastructure, digital access, and scholarships (Saini & Rao, 2022).

4. Future Roadmaps

Drawing on the literature, six interlinked roadmaps are proposed to operationalise the NEP's aspirations over the 2025-2035 horizon.

4.1. Roadmap 1 – Digital Curriculum Ecosystem

Objective: Deploy a *centralised, modular, open-source* digital curriculum platform that supports multilingual content, adaptive learning pathways, and teacher-generated resources.

- **Key Actions:**

1. Establish the *National Digital Learning Repository* (NDLR) under the National Education Mission, hosting curriculum units in 22 scheduled languages (Kaur, 2024).
 2. Integrate *Learning Analytics* dashboards for real-time feedback on student progress, aligned with competency outcomes (Patel & Singh, 2023).
 3. Pilot *offline-first* solutions for low-connectivity regions, leveraging portable devices and community learning centres (Reddy et al., 2022).
- **Projected Impact:** Enhanced curriculum relevance, reduced language barriers, and scalable teacher support.

4.2. Roadmap 2 – Experiential and Community-Based Learning

Objective: Institutionalise *service-learning* and *project-based* modules that connect classrooms with local ecosystems, industries, and civic bodies.

- **Key Actions:**
 1. Form *Community Learning Partnerships* (CLPs) linking schools with NGOs, local enterprises, and Panchayati Raj Institutions (Pillai, 2023).
 2. Embed “*Sustainable Development Goals (SDG) Labs*” at secondary schools to foster interdisciplinary problem-solving (Bhatia & Mishra, 2024).
 3. Develop assessment rubrics that capture *social impact* and *citizen competencies* (Sharma, 2022).
- **Projected Impact:** Greater relevance of learning, strengthened civic engagement, and pathways to local employment.

4.3. Roadmap 3 – Reforming Assessment Architecture

Objective: Shift to *continuous, competency-based assessment* (CCBA) models that reduce exam stress and support personalised learning trajectories.

- **Key Actions:**
 1. Roll out *digital formative assessment kits* in primary schools, integrating AI-driven item generation and instant analytics (Singh & Rao, 2024).
 2. Pilot *National Skills Certification* at the end of middle stage, recognised by industry and higher education (National Skills Development Corporation, 2023).
 3. Gradually phase out board examinations for class 10, replacing them with *portfolio-based* evaluations (Choudhary, 2023).
- **Projected Impact:** Enhanced learning outcomes, reduced rote memorisation, and smoother transitions to higher education or vocational pathways.

4.4. Roadmap 4 – Teacher Workforce Revitalisation

Objective: Build a *future-ready* teacher cadre equipped with pedagogical expertise, digital fluency, and socio-cultural competence.

- **Key Actions:**
 1. Implement *Hybrid Faculty Development Programs* (HFDP) combining online MOOCs, face-to-face mentorship, and micro-credentialing (Kumar & Rao, 2024).

2. Institutionalise *teacher-lead research grants* to promote classroom-based inquiry and curriculum co-design (Mishra et al., 2023).
 3. Introduce a *performance-linked incentive framework* tied to student learning gains and CPD milestones (Government of India, 2023).
- **Projected Impact:** Increased teacher motivation, reduced attrition, and improved instructional quality.

4.5. Roadmap 5 – Decentralised Governance and Fiscal Federalism

Objective: Strengthen *state-level capacity* for policy adaptation while ensuring *national coherence* through a robust monitoring system.

- **Key Actions:**
 1. Create *State Education Innovation Cells* (SEICs) to customise curriculum and assessment models based on regional needs (Arora, 2022).
 2. Deploy a *Multi-Tier Funding Model* where the central government earmarks *targeted grants* for ECCE, digital infrastructure, and inclusive education, matched by state contributions (Ministry of Finance, 2022).
 3. Institutionalise *Annual Policy Review Conferences* (APRC) involving central, state, and civil-society stakeholders to assess progress against NEP indicators (Nagarajan, 2024).
- **Projected Impact:** Balanced autonomy, improved resource mobilisation, and transparent accountability mechanisms.

4.6. Roadmap 6 – Equity-Centric Interventions

Objective: Close the *learning and opportunity gaps* for marginalized groups through targeted programs and structural reforms.

- **Key Actions:**
 1. Expand “*School-to-Home*” digital kits for children with disabilities and those in remote areas, ensuring adaptive content and assistive technologies (Saini & Bhat, 2023).
 2. Scale *Scholarship-Plus* schemes that combine financial aid with mentorship, career counselling, and skill-training for Scheduled Castes, Scheduled Tribes, and Other Backward Classes (OBCs) (Kaur & Mishra, 2024).
 3. Enforce *Infrastructure Equity Audits* at the district level to monitor school facilities, teacher-student ratios, and internet connectivity (Education Policy Review Board, 2023).
- **Projected Impact:** Greater inclusion, reduced dropout rates, and enhanced social mobility.

5. Implementation Issues

Despite the policy’s comprehensive design, implementation has encountered persistent obstacles. The following sub-sections synthesize empirical findings and stakeholder perspectives.

5.1. Fiscal Constraints and Allocation Gaps

- **Insufficient Budgetary Commitment:** While the NEP calls for 6 % of GDP for education, actual public spending reached only 4.1 % in FY 2023 (Reserve Bank of India, 2024). This shortfall hampers infrastructure upgrades, especially in rural and tribal districts (Basu, 2022).
- **Delayed Grant Disbursement:** State-level education departments report irregular flow of central grants, undermining timely rollout of digital platforms and teacher training (Rashid & Singh, 2021).

5.2. Capacity Deficits in Human Resources

- **Teacher Shortage:** India faces an estimated deficit of 6.5 million teachers at the primary level (UNESCO-IAS, 2022). The transition to a four-year I-B.Ed. programme has strained existing teacher-training institutions, many of which lack adequate faculty and infrastructure (Mishra & Varshney, 2021).
- **Digital Literacy Gaps:** A 2023 survey indicated that only 38 % of teachers possessed basic proficiency in learning management systems, limiting the effective use of digital curricula (Kaur, 2024).

5.3. Infrastructural and Technological Barriers

- **Digital Divide:** As of 2024, only 54 % of schools in government-run rural areas had reliable broadband connectivity, compared with 89 % in urban schools (National Informatics Centre, 2024). This disparity threatens equitable access to the envisaged digital ecosystem.
- **Inadequate Learning Spaces:** Many schools lack dedicated *activity rooms* or *science labs* necessary for experiential learning, contravening NEP's emphasis on hands-on pedagogy (Saini & Rao, 2022).

5.4. Governance and Coordination Challenges

- **Fragmented Institutional Arrangements:** Overlapping mandates between the Ministry of Education, UGC, AICTE, NCTE, and state boards create confusion, particularly concerning curriculum approval and accreditation (Arora & Singh, 2023).
- **Limited Decentralisation:** While the NEP promotes state autonomy, some states remain resistant to curriculum changes due to political considerations or lack of technical expertise (Nagarajan, 2024).

5.5. Sociocultural Resistance

- **Language Politics:** The push for mother-tongue instruction has encountered opposition in regions where Hindi or English are perceived as vehicles for upward mobility (Ghosh, 2023).
- **Parental Expectations:** Deep-rooted reliance on board examinations as the primary gateway to elite higher education creates pushback against alternative assessment models (Choudhary, 2023).

5.6. Monitoring and Evaluation Deficits

- **Data Quality Issues:** Inconsistent reporting standards across states impede the generation of reliable, disaggregated data needed for evidence-based decision-making (Education Policy Review Board, 2023).
- **Lack of Independent Audits:** There is a scarcity of third-party evaluations of pilot programmes, limiting the ability to scale successful interventions (Mishra et al., 2023).

6. Discussion

The NEP 2020 articulates an ambitious vision that aligns with global education reform trends—namely, learner-centred pedagogy, competency-based curricula, and inclusive access (UNESCO, 2022). However, the juxtaposition of *policy intent* and *implementation reality* reveals a complex terrain shaped by fiscal, infrastructural, human-resource, and sociopolitical dynamics.

6.1. Interdependence of Roadmaps

The six proposed roadmaps are mutually reinforcing. For instance, a robust *digital curriculum ecosystem* (Roadmap 1) cannot succeed without *teacher workforce revitalisation* (Roadmap 4) and reliable *digital infrastructure* (issue 5.3). Similarly, *equity-centric interventions* (Roadmap 6) are contingent upon effective *decentralised governance* (Roadmap 5) that can channel resources to underserved districts.

6.2. The Role of Federalism

India's quasi-federal structure offers both opportunities and challenges. States possess the flexibility to adapt the NEP to contextual realities, yet the lack of an overarching coordination mechanism can lead to *policy fragmentation*. The establishment of *State Education Innovation Cells* (Roadmap 5) and regular *Annual Policy Review Conferences* could serve as platforms for synchronising state-level innovation with national priorities.

6.3. Balancing Standardisation and Localization

While the NEP stresses standardisation of learning outcomes, it simultaneously champions multilingualism and regional relevance. Achieving this balance requires *locally contextualised curriculum modules* that conform to national competency frameworks. The NDLR (Roadmap 1) can facilitate this by allowing states to upload localized content while maintaining quality checks through a central peer-review mechanism.

6.4. Addressing the Equity Imperative

Persistent inequities—particularly for children with disabilities, girls in rural areas, and socially marginalised groups—remain a central challenge. The *Scholarship-Plus* model (Roadmap 6) and *Infrastructure Equity Audits* provide targeted levers to redress disparities. However, these interventions must be underpinned by *robust data systems* that capture disaggregated metrics on enrollment, learning outcomes, and resource allocation.

6.5. The Imperative of Monitoring and Learning

The NEP's own language underscores a *learning-government* approach, wherein policies are continuously refined based on empirical evidence (Ministry of Education, 2020).

Institutionalising *independent impact evaluations* and integrating their findings into the *Annual Policy Review Conferences* can close the feedback loop between research and practice.

7. Recommendations

Based on the synthesis of literature and field evidence, the following actionable recommendations are proposed for policymakers, state governments, and civil-society partners:

1. **Secure and Institutionalise Funding:** Enact a *legally binding* commitment to allocate at least 6 % of GDP to education, with a dedicated *ECCE* and *digital infrastructure* fund. Adopt a *performance-based tranche system* linking grant release to measurable implementation milestones.
2. **Scale Teacher Capacity-Building:**
 - Expand *Hybrid Faculty Development Programs* leveraging MOOCs from reputed Indian Institutes (IITs, IIMs).
 - Introduce a *National Teacher Mentorship Scheme* pairing novice teachers with experienced mentors across districts.
3. **Accelerate Digital Infrastructure:**
 - Prioritise *last-mile connectivity* via public-private partnerships with telecom providers under the *Universal Service Obligation*.
 - Deploy *solar-powered broadband hubs* in off-grid schools to mitigate energy constraints.
4. **Operationalise Multi-Stakeholder Governance:**
 - Formalise the *State Education Innovation Cells* with clear mandates, budgets, and reporting lines.
 - Create a *National Education Data Warehouse* with standardized data collection protocols, accessible to researchers and policymakers.
5. **Embed Experiential Learning at Scale:**
 - Mandate *minimum experiential learning hours* per grade in the curriculum, monitored through school self-assessment reports.
 - Provide *seed grants* for community-based projects that link students with local enterprises and NGOs.
6. **Reform Assessment Framework:**
 - Pilot *digital formative assessment tools* in 25% of districts, with the objective of expanding nationally within five years.
 - Phase out the class-10 board exam by 2028, replacing it with a *portfolio and competency-based* evaluation system.
7. **Strengthen Equity Mechanisms:**
 - Implement *targeted infrastructure upgrades* for schools serving Scheduled Tribes and remote Himalayan districts.
 - Introduce *inclusive design guidelines* for digital learning resources, ensuring accessibility for students with visual, auditory, and cognitive impairments.
8. **Institutionalise Independent Monitoring:**
 - Commission *annual third-party impact evaluations* of NEP pilots, conducted by accredited research institutions.
 - Publish *state-wise NEP implementation dashboards* for public scrutiny and accountability.

8. Conclusion

The National Education Policy 2020 heralds a transformative agenda that, if effectively executed, can reposition India's education system as a catalyst for inclusive growth, innovation, and democratic citizenship. The proposed future roadmaps—spanning digital curriculum ecosystems, experiential learning, assessment reform, teacher revitalisation, decentralised governance, and equity-centric interventions—offer a coherent blueprint for translating policy intent into tangible outcomes.

Nonetheless, the journey from vision to reality is fraught with considerable challenges: fiscal inadequacy, human-resource bottlenecks, infrastructural deficits, governance complexities, sociocultural resistance, and data limitations. Addressing these impediments requires a concerted, multi-level effort that blends political will, robust financing, capacity building, and continuous learning.

By embracing a *learning-government* ethos—where policy design, implementation, monitoring, and revision are dynamically interlinked—India can navigate the intricacies of reform and deliver on its promise of “a holistic, multidisciplinary, and socially equitable education for all.” The stakes are high, but the roadmap is now clearer; the decisive factor will be the collective commitment of central and state governments, educators, civil society, and the broader citizenry to see the NEP through to its full realisation.

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