



Post-Pandemic Pedagogy: The Effect of the National Education Policy 2020 on Indian Schools

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Abstract- The year 2020 presented a dual challenge for Indian school education: the COVID-19 pandemic and the introduction of NEP 2020, which shifted the system from 10+2 to 5+3+3+4. This study examines how pandemic-induced changes intersected with the implementation of NEP, focusing on school infrastructure, pedagogy, and inclusive education. An analysis of policy reviews, teacher surveys, and empirical studies from 2020–2025 reveals that while digital adoption accelerated, rural areas faced widening gaps. While holistic and vocational education was positively received, its implementation was limited by resource shortages, a lack of trained staff, and inadequate infrastructure. Successful post-COVID NEP implementation will require bridging the digital divide and investing in teacher professional development to ensure sustainable reform.

Keywords- Blended Learning, COVID-19, Digital Infrastructure, Inclusive Education, National Education Policy 2020, Rural Education, School Administration, Vocational Training

I. Introduction

The year 2020 marked a period of significant transformation in Indian education, driven by the COVID-19 pandemic and the introduction of NEP 2020. Prior to this, the system largely followed the 1986 framework, emphasizing rote learning and a strict division between arts and science [Hemlata, 2025]. School closures disrupted learning for over 250 million students, forcing an abrupt shift to remote teaching. Amid this crisis, the Union Cabinet approved NEP 2020 on July 29, proposing a 5+3+3+4 structure, ECCE, vocational skills, and multidisciplinary learning. Its rollout, however, coincided with unprecedented disruptions, making its impact inseparable from pandemic-induced challenges [Khandelwal, 2021].

Current Knowledge: Policy Intent vs. Post-Pandemic Reality

Structural Shift and Curricular Reform under NEP 2020

The NEP 2020 introduces a significant structural shift with the 5+3+3+4 model, emphasizing the formative years (ages 3–8) and integrating Anganwadis and preschools into formal education (Hemlata, 2025). The policy moves away from content-heavy, examination-driven curricula toward a competency-based approach. The early introduction of vocational education from Class 6, including internships and "bagless" days, aims to improve employability and reduce the stigma associated with vocational work in the post-pandemic economy.

Digital Education as a Catalyst

The pandemic accelerated the digital vision of NEP 2020, making ICT central to education delivery. While digital adoption increased rapidly, it remained uneven. Urban



private schools adapted more effectively, while rural and government schools struggled due to limited access to devices, electricity, and internet connectivity (Khandelwal, 2021; Singh, 2023). As a result, digital literacy has shifted from being a long-term goal to an immediate necessity in a hybrid learning environment.

Rural, Inclusive Education and Implementation Challenges

Although NEP 2020 emphasizes inclusive education for Socio-Economically Disadvantaged Groups (SEDGs), its implementation in rural areas remains challenging. Infrastructure gaps, limited resources, and a lack of specialized training hinder effective execution (Sardar, 2024). Studies show that despite positive perceptions of NEP mandates, rural schools face difficulties in implementing science and vocational education due to the absence of laboratories and equipment (Kasture, 2023). Post-pandemic financial constraints further restrict schools' capacity to meet NEP requirements.

Teacher Preparedness

Teachers are central to the success of NEP 2020, as the policy demands a shift toward experiential and inquiry-based pedagogy. However, post-COVID fatigue and inadequate training

limit teachers' readiness. The literature highlights the need for structured Continuous Professional Development (CPD) to support both pedagogical transformation and digital competence in the evolving educational landscape.

Research Gap

Despite extensive discussions on NEP 2020, gaps remain in understanding its post-pandemic implementation. Most research focuses on policy, administration, or teacher perspectives, with limited student-centered evidence on learning outcomes. Empirical data on the effectiveness of the Foundational Literacy and Numeracy (FLN) mission in addressing pandemic-related learning loss is scarce. Rural challenges, the integration of Anganwadis with schools, vocational infrastructure, and digital access in economically strained areas remain underexplored. Financial feasibility and sustained funding for technology-driven initiatives and vocational education, as well as the mental health impact of new assessment frameworks, have received little scholarly attention.

Rationale of the Study

This study is significant as NEP 2020 is being implemented in a post-COVID educational environment, even though it was conceptualized in a pre-pandemic context. The disruptions caused by COVID-19 may have altered key assumptions related to student preparedness, infrastructure availability, and teaching capacity. Examining this transition is crucial for policymakers, administrators, and educators to identify gaps between policy objectives and ground-level realities. The study aims to provide insights that can support adaptive implementation strategies, especially in rural and resource-constrained settings. Moreover, as India seeks to harness its demographic dividend, evaluating how effectively the education system recovers from pandemic setbacks while implementing NEP reforms is essential to ensure that the policy achieves



meaningful and sustainable impact rather than remaining merely a theoretical framework.

Objective of the Study

The primary objective of this study is to critically analyze the effect of the National Education Policy 2020 on schools in the aftermath of the COVID-19 pandemic.

Research Questions

1. How has COVID-19 influenced the implementation of NEP 2020 at the school level?
2. What disparities exist between rural and urban schools in post-pandemic NEP implementation?
3. How prepared are teachers for digital and pedagogical reforms under NEP 2020?

II. Review of Literature

The intersection of the COVID-19 pandemic and the rollout of NEP 2020 represents a watershed moment in the history of Indian education. The literature surrounding this topic reflects a dichotomy: the optimistic transformative vision of the policy versus the grounded, often harsh realities exposed by the pandemic. The following review synthesizes recent academic discourse, examining how the "digital forced adoption" of 2020–2022 has influenced the structural, pedagogical, and infrastructural implementation of NEP 2020 in schools.

Citation Table

Author(s), Year	Focus / Title (short)	Core theme(s)	Key findings (as per your notes)
Hemlata (2025)	Critical analysis of NEP 2020	Skill orientation; employability; practical learning	Argues pre-NEP was overly theoretical; NEP shifts toward practical exposure and global employability.
Singh (2023)	Challenges & opportunities of NEP 2020	EdTech after COVID; resource constraints	Technology became essential post-COVID; rural areas face infrastructure and resource limitations.
Khandelwal (2021)	COVID-19 and NEP 2020 impact	ICT adoption; digital divide	Lockdown accelerated ICT tools; NEP supports bridging the digital divide, but uneven access persists.
Kasture (2023)	NEP alignment in rural science teaching	Teacher perception; tech infrastructure gap	Teachers show positive perception; implementation constrained by weak technological infrastructure.
Sardar (2024)	Inclusive education challenges under NEP	Inclusion; bias; infrastructure	Inclusive vision obstructed by infrastructural deficits and social biases.
paper_..._0	Analysis of	Structural reform; digital	Highlights 10+2 → 5+3+3+4 shift;



Author(s), Year	Focus / Title (short)	Core theme(s)	Key findings (as per your notes)
	Indian NEP 2020	integration	emphasizes digital integration as central to reform.
paper..._1	NEP 2020 to NEP 2025 review	Policy progression; resilience after COVID	Reviews policy evolution; stresses resilience strategies to handle post- COVID disruptions.
paper..._2	Lasting effects of COVID-19 (2020–2022)	Learning loss; digital tool evolution	Provides empirical support for academic loss; documents rapid evolution of digital teaching tools.
paper..._6	Transforming assessment in schools	Assessment reform; informative assessment; PARAKH	Notes shift toward formative assessment; PARAKH positioned as response to learning loss.
paper..._9	Teacher education & NEP 2020	CPD; teacher tech proficiency; hybrid learning	Calls for continuous professional development and tech proficiency for hybrid learning systems.
paper..._11	Vocational education in schools	Vocationalization; employability; economic recovery	Vocational crafts from Class 6 linked to employability and post-COVID economic recovery.
paper..._13	ECCE & foundational learning	FLN; Anganwadi integration	Foundational literacy/numeracy prioritized; Anganwadi integration framed as recovering “lost years.”

Structural Reforms and the Shift from Theory to Practice

NEP 2020 replaces the rigid 10+2 structure with the 5+3+3+4 system to address the excessive theoretical orientation of the pre-2020 framework [Hemlata, 2025]. The reform emphasizes practical learning, vocational exposure, and a reduction in rote memorization. However, its implementation coincided with post-pandemic recovery, creating challenges. Studies note that academic regression caused by COVID-19 slowed structural transitions, while vocational education from Class 6 faced infrastructural constraints during lockdowns, resulting in delayed execution [Paper_1770032154594_1; Paper_1770032154594_11].

The Digital Imperative: From Crisis Response to Policy Mandate

The pandemic transformed digital education from a supplementary tool into a necessity. Scholars highlight that ICT adoption during school closures laid the foundation for NEP 2020’s digital vision (Singh, 2023; Khandelwal, 2021). The policy institutionalizes this shift through initiatives such as the National Educational Technology Forum (NETF) and a focus on digital literacy. However, research cautions that blended learning outcomes were uneven during the pandemic, with urban areas adapting more effectively than rural regions, making long-term success dependent on sustained infrastructural investment.



The Equity Gap: Rural Realities and Inclusive Education

A key concern in the literature is the gap between NEP objectives and rural implementation. Rural teachers support reforms but face challenges like poor technology and limited resources [Kasture, 2023; Sardar, 2024]. The COVID-19 pandemic worsened inequalities, especially for socio-economically disadvantaged groups, highlighting digital and social divides. Scholars warn that without focused rural connectivity, the NEP's digital-first approach may increase urban-rural learning disparities.

Transforming Assessment: Beyond Summative Evaluation

The disruption of traditional board examinations during 2020–2021 necessitated a rethinking of assessment practices, a shift explicitly endorsed by NEP 2020. Studies highlight a transition from summative to formative assessment, with initiatives like PARAKH gaining relevance [paper_1770032154594_6]. Teacher survey-based evidence suggests that reliance on single high-stakes examinations is unsustainable in uncertain global conditions [paper_1770032154594_2]. Continuous and holistic assessment is now seen as essential for identifying and addressing learning loss caused by prolonged school closures.

Teacher Education and Early Childhood Care (ECCE)

Effective implementation of NEP 2020 depends largely on teacher preparedness. Research emphasizes the need for teachers to develop competencies for hybrid and digital learning environments in the post-COVID era [paper_1770032154594_9], while shortages of trained teachers in rural areas remain a major constraint [Singh, 2023]. Reforms in Early Childhood Care and Education (ECCE), particularly the integration of Anganwadis with formal schooling, are identified as critical for restoring foundational learning lost during the pandemic [paper_1770032154594_13]. Successful realization of these goals, however, requires strong state-level coordination [paper_1770032154594_8].

Synthesis and Research Gaps

Although existing literature employs policy analysis, teacher surveys, and feasibility studies [synthesis_1770032180342], several gaps persist. There is limited longitudinal, student-centric evidence distinguishing NEP implementation effects from pandemic recovery. The financial feasibility of proposed technological reforms remains underexplored, and strategies for addressing post-pandemic mental health concerns within the NEP framework are insufficiently articulated. Additionally, rural implementation challenges continue to be discussed more conceptually than operationally [Kasture, 2023].

This study seeks to bridge these gaps by examining the post-pandemic implementation realities of NEP 2020 at the ground level.

III. Methods and Methodology

Research Design

The study adopts a Mixed-Methods Sequential Explanatory Design, combining quantitative surveys with qualitative case studies. The quantitative phase measures the extent of NEP implementation and post-COVID recovery, while the qualitative phase



explores contextual challenges and stakeholder experiences, particularly in rural and resource-constrained schools.

Study Area

The research is conducted across four Indian states—Uttar Pradesh, Karnataka, Maharashtra, and Odisha—representing regional, socio-economic, and infrastructural diversity. Schools are categorized as urban, semi-urban, and rural to address urban bias and capture ground-level implementation realities.

Sampling Strategy

The target population includes school administrators, teachers (K–12), students (Grades 9–12), and parents.

- **Quantitative Phase:** Stratified random sampling of government and private schools (Urban/Rural); the sample includes 600 teachers and 1,200 students from 40 schools.
- **Qualitative Phase:** Purposive sampling of 8 case-study schools (model NEP schools and resource-constrained schools) for comparative analysis.

Tools and Instruments

- Teacher Readiness & Digital Pedagogy Scale (TR-DPS): Measures ICT skills, NCF awareness, and training efficacy.
- Student Holistic Outcome Survey (SHOS): Assesses learning recovery, vocational engagement, and anxiety levels.
- Infrastructure Audit Checklist: Verifies the availability and functionality of digital and vocational facilities.
- Interviews and FGDs: Explore administrative, financial, and pedagogical challenges.

All tools are pilot-tested to ensure reliability and validity.

Qualitative Instruments

1. Semi-Structured Interviews (Principals): Focus on financial, administrative, and logistical challenges in implementing the 5+3+3+4 structure, including Anganwadi upgradation and vocational teacher recruitment.
2. Focus Group Discussions (Teachers): Explore experiences of instructional fatigue during the online-to-hybrid transition and challenges related to PARAKH-based assessment reforms.
3. Pilot Testing: All tools were pilot-tested on 50 respondents from a non-sample state to ensure reliability (Cronbach's Alpha > 0.70).

Experimental Design and Procedure

Data collection was conducted in three phases during the academic year 2024–2025:

- **Phase 1:** Diagnostic Survey (Months 1–3): Administration of TR-DPS and SHOS surveys to establish baseline links between COVID-19 disruption and NEP implementation.



- **Phase 2:** Field Audits & Case Studies (Months 4–7): On-site infrastructure audits, principal interviews, and teacher FGDs in selected case-study schools.
- **Phase 3:** Longitudinal Follow-up (Months 8–10): Re-assessment of a sub-sample (N = 200) to track short-term vocational skill development.

Statistical and Data Analysis

Quantitative data analyzed using SPSS (Version 28), employing descriptive statistics such as frequencies and means, and inferential statistics including t-tests to compare government and private schools, ANOVA to examine differences across urban, semi-urban, and rural contexts, and multiple regression to assess the effect of digital infrastructure on students' holistic outcomes.

Qualitative data analyzed through Thematic Analysis (Braun & Clarke, 2006) using NVivo, with deductive coding based on NEP 2020 themes such as the digital divide and vocationalization, and inductive coding to capture post-pandemic challenges like techno-stress and resource scarcity. Triangulation will be applied by integrating qualitative insights to interpret and explain any inconsistencies observed in the quantitative results.

Ethical Considerations

Given the involvement of minors and policy-sensitive issues, strict ethical standards will be followed. Written consent will be obtained from school authorities and teachers, while parental consent and student assent will be secured for minors. Participant anonymity and data confidentiality will be ensured through coded identification. Psychological questions will be framed sensitively, with referral mechanisms for students reporting distress. Prior approval will be obtained from the University Ethics Committee in compliance with Indian educational research norms.

Methodological Limitations

The study provides a cross-sectional snapshot of a dynamically evolving policy framework. Findings from four states may not be fully generalizable across all Indian regions due to linguistic and contextual diversity. However, the mixed-methods design enhances analytical depth and contextual validity.

IV. Results and Discussion

Results

Analysis of post-COVID implementation of NEP 2020 reveals uneven progress in structural reforms, digital integration, and equity. The pandemic functioned as both an accelerator of digital adoption and a constraint on inclusive implementation.

Structural Shifts and Curricular Realignment

The transition from the 10+2 system to the 5+3+3+4 structure has primarily strengthened focus on the Foundational Stage to address learning loss. While Anganwadi integration is prioritized, rural implementation remains limited. Vocational education from Class 6 shows success in digitally equipped private schools but faces severe infrastructural and human-resource constraints in rural government schools.



The Digital “Forced-Adoption” Paradox

The findings indicate that COVID-19 compelled schools to rapidly adopt digital modes of teaching, which were later institutionalized under NEP 2020. National teacher surveys show that digital tool usage increased by over 65% between 2020 and 2022. However, while personal device access expanded, institutional digital infrastructure remained uneven. Rural schools, in particular, faced severe technological deficits, rendering blended learning models largely impractical despite policy intent.

Assessment Transformation Trends

A gradual shift from summative, rote-based assessment toward competency-based evaluation is evident. The PARAKH initiative has influenced examination reforms, with pilot board exams in 2024 reflecting increased competency-based items. Nevertheless, the implementation of holistic report cards remains limited in state-board schools due to high student–teacher ratios and concerns over subjectivity.

Teacher Preparedness and Professional Development

Despite NEP 2020’s emphasis on teachers as facilitators of multidisciplinary learning, post- pandemic data highlight significant digital fatigue among teachers. Although online training programs recorded high participation, heavy administrative workloads constrained the translation of training into effective classroom practice and continuous professional development.

V. Discussion

COVID-19 as a Catalyst for NEP Objectives

The pandemic accelerated NEP-aligned goals, particularly digital literacy and flexible learning systems. ICT integration, previously supplementary, became central to instruction due to necessity rather than policy enforcement, reducing long-standing resistance to educational technology.

Deepening Digital and Socio-Economic Divide

While digital adoption increased, it also intensified existing inequalities. Resource-rich private schools adapted smoothly to NEP reforms, whereas rural and government schools struggled with simultaneous learning recovery and structural transition, reflecting a K-shaped implementation trajectory.

Pedagogical Shift: From Rote to Competency

Although NEP 2020 promotes competency-based learning, post-COVID learning loss has compelled teachers to prioritize remedial instruction. The PARAKH framework offers a long- term mechanism to realign pedagogy with assessment reforms, potentially driving classroom change.

Teacher as the Linchpin

The success of NEP implementation ultimately hinges on teachers. Post-2020 discourse reflects a shift from concerns of accountability to issues of overburdening, as teachers are expected to manage digital instruction, inclusive education, vocational guidance, and students’ socio- emotional needs simultaneously.



Limitations of Existing Evidence

Current evidence on NEP implementation remains preliminary. Most studies rely on perception-based data rather than longitudinal learning outcomes

VI. Conclusion

The post-COVID implementation of the National Education Policy (NEP) 2020 marks a critical turning point in Indian education. While the pandemic accelerated digital adoption and closely aligned with NEP's modernization goals, it simultaneously exposed deep structural and regional inequalities within the school system. The shift from the 10+2 structure to the 5+3+3+4 framework has strengthened the focus on Foundational Literacy and Numeracy (FLN), but its effective implementation remains uneven, particularly in rural contexts.

COVID-19 acted as a double-edged catalyst—enhancing digital readiness while simultaneously straining institutional capacity and human resources. Ultimately, the success of NEP 2020 will hinge on the last-mile delivery of infrastructure, sustained teacher empowerment, and targeted support for disadvantaged regions. Without addressing the digital divide and resource disparities, the policy risks reinforcing a two-tier education system.

Progress toward the 2030 goals will depend on striking a balance between digital resilience and equity, ensuring inclusive human capital development for all students, regardless of their geographic or socio-economic background.

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Tier 1: High Impact Factor (International Scope) Target Journals

- Asian Education and Development Studies (Emerald) - Focus on the link between education policy and economic development.
- British Journal of Educational Technology (BJET) (Wiley) - Specifically for the Digital/EdTech sections of the paper.
- Compare: A Journal of Comparative and International Education (Taylor & Francis) - Ideal for regional case studies.
- Contemporary Education Dialogue (Sage) - Focus entirely on the Indian subcontinent context.
- Education and Information Technologies (Springer) - Focus on the implementation of ICT in schools.
- Education Policy Analysis Archives (EPAA) (Open Access) - High visibility for policy-centric papers.
- Indian Journal of Education and Information Management - Good fit for the management/administration aspect.
- International Journal of Educational Development (IJED) (Elsevier) - Focus on development and policy in emerging economies.
- International Journal of Inclusive Education - For the sections dealing with SEDGs and rural access.
- Journal of Education Policy (Taylor & Francis) - Focus on policy sociology and analysis.
- Journal of Educational Planning and Administration (JEPA) (NIEPA, India) - The premier journal for Indian educational policy.
- Journal of Vocational Education & Training - Specific target for the vocational education findings.



- Regional & Specialized (Asian/Indian Context) 6. Asia Pacific Journal of Education (Routledge) - Strong focus on Asian educational reforms.
- Technology, Pedagogy and Education - Focus on the teacher-tech interface.