NEP 2020: BRIDGING INDIA'S SKILL GAP IN HIGHER EDUCATION

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Abstract

The National Education Policy (NEP) 2020 is meant to be a major change that will change India's education system, notably for higher education. One of its most important contributions is that it tries to close the long-standing gap between the skills needed in academics and those needed in the business world. India still has trouble finding jobs for its graduates, even if the number of graduates is going up every year. This is because of old curriculum, a lack of ties to the industry, a lack of vocational integration, and a lack of digital literacy. NEP 2020 tackles these problems by pushing for education that crosses disciplines, flexible curricula, the inclusion of vocational training, a focus on new and digital technologies, and the creation of ecosystems for research and innovation. This paper critically analyzes NEP 2020 within the framework of India's higher education talent gap, evaluates the existing literature and traditional research approaches employed to investigate analogous changes, and underscores the implementation issues. The report indicates that NEP 2020 provides a revolutionary framework; however, successful implementation, ongoing evaluation, and robust collaboration between industry and academics are crucial to equip India's youth with the necessary skills for the 21st-century global economy.

Key Words: *NEP, Industry connection, Vocational training,*

1.Introduction:

With 65% of Indians under 35, demographics are changing. This young dividend might make India a global knowledge and innovation hub if its higher education system generates talented graduates. Employability remains a challenge despite more colleges and universities. Many graduates lack work skills, surveys reveal. Colleges teach different skills than employers need.

Most ambitious skills gap effort in India is NEP 2020. Increased flexibility, transdisciplinary, vocational, and digital skills learning. This report evaluates NEP 2020's concept and ambition to close

India's higher education talent gap and discusses obstacles.

Three research questions emerge:

1. How does NEP 2020 address higher education skill gaps?
2. Does the policy follow global skill-based education best practices?
3. How can policy implementation issues be resolved?

Statistics Show CBSE/NCERT Curriculum Flaws

1. Graduate Employment • Only 54.8% of Indian graduates can find job, while some sources claim 42.6% [1].
• 44.5% of Indian 20–24-year-olds are unemployed, even with graduate or PhD degrees [1].
2. Vocational Training Penetration • 3.8% of Indian workers have formal vocational training [2].
3. School Digital Infrastructure • 33.9% of Indian schools have internet. Only 24.2% of government school students, 53.1% in government-aided schools, and 59.6% in private unaided schools [3].
4. Teacher Digital Proficiency: 31% of teachers lack digital skills. Only 31.4% employ LMS platforms and 14.9% run cloud-based laboratories, yet 93.4% can handle virtual classrooms [4]. [5].
• Nearly 75% of teachers employ peer aid, self-learning, and trial-and-error instead of systematic digital training [4].
5. Basic Learning Gaps NCERT exams reveal that 48% of Gujarati Class 3 students understand multiplication as repeated addition, compared to 54% nationally [6].
6. Digital Divide • 52.1% of Indians use the internet, while only 27.5% of rural residents. Nearly 70% of rural schools are affected [7].

S.No.	Aspect	Current Scenario (CBSE/NCERT)
[1]	Graduate Employability	Only 42–55% employable; youth unemployment ~44%
[2]	Vocational Training	Only 3.8% workforce formally trained
[3]	Internet in Schools	~34% schools connected; gov’t schools only 24%
[4][5]	Teacher Digital Proficiency	31% not proficient; <15% can handle LMS/cloud tools
[6]	Foundational Skills	Only ~48–54% Class 3 students understand multiplication basics
[7]	Digital Divide	Rural penetration just 27.5%; urban ~52.1%

Studies imply Indian higher education does not meet employment needs. Former UGC and AICTE modifications expanded universities. The reforms did not improve vocational training, interdisciplinary learning, or industry ties. FICCI and NASSCOM reported 70% of graduates lacked job-relevant skills, indicating system failure.

Compare countries for helpful data. To smooth the transition from school to work, the German "Dual System" combines classroom learning and occupational apprenticeships. Finland created phenomenon-based transdisciplinary learning. Singapore's "SkillsFuture" program promotes lifetime learning for new industries. Global approaches demonstrate the need for schoolwork-practical skills balancing.

Indian research on NEP 2020 acknowledges its progressive nature but warns of implementation challenges, especially in rural and underfunded institutions. Other research show that digital colleges and platforms are helping more people learn new skills, yet the digital gap persists. The research says NEP 2020 follows global trends, but its success depends on addressing regional inequities and building proper monitoring systems.

2.1 Existing Research

Academics evaluate NEP 2020's impact on Indian higher education. Institutions should be autonomous, say Gupta and Choubey (2021). Higher education needs long-term autonomy to meet NEP's flexibility and innovation goals. Wankhade and Venkateshwarlu (2021) examined NEP's structural changes' modernization potential, resource restrictions, and system transformation challenges. Sara (2022) examined NEP effects on school and higher education and stressed efficiency. Research on institutional influence varies. After NEP approval, Jain, Khare, Goel, and Goel (2023) found reduced curricular rigidity and increased student participation in individual institutions. Kumar (2021) termed NEP "India 2.0," a revolutionary objective with inconsistent government execution. Sharma (2022) found leadership improves NEP accountability and change.

We address chances and issues. Shinde et al. (2024) say the NEP promotes innovation but lacks funding, teacher training, and infrastructure. Sutar (2024) states university libraries offer NEP digital and transdisciplinary materials. In 2024, Mishra, Singh, and Nirmal examined NEP's transdisciplinary Indian higher education integration strategies. Researchers studied teaching innovations. Chawla (2024) hailed NEP's revolutionary potential, whereas Aisha and Ratra (2023) stressed integrated learning in Indian higher education. NEP's English teaching innovations could help India compete globally, however Yadav & Yadav (2023) questioned fairness and inclusivity. NEP's global effect in making India a knowledge center was recognized by Pandey (2025), Singh (2024), and Kalaivani and Devaki (2023).

These studies concur that NEP 2020 is a whole higher education transition framework that requires institutional readiness, global collaboration, digital integration, and continual assessment.

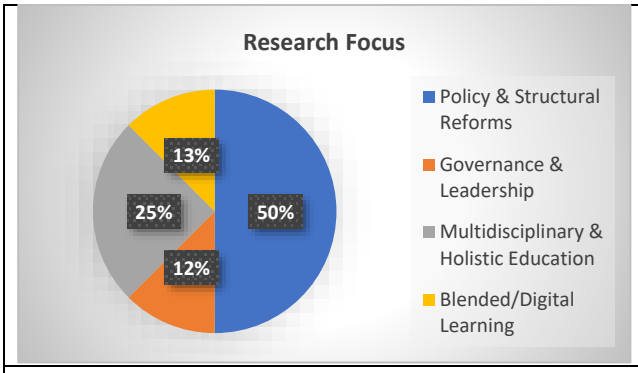
2.2 Statistical Analysis of NEP 2020 Research Papers (2021–2025)

The National Education Policy (NEP) 2020 has sparked scholarly debate due to its ambitious higher education goals for India. For this scholarship, 19 key research articles from 2021 to 2025 were statistically analyzed. Year of publication, topic, study approach, and limits categorize studies.

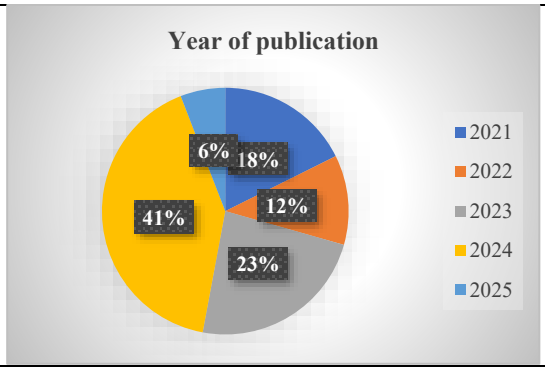
This statistical study shows how academics have used NEP 2020 and offers further research. Quantifying publication trends, theme orientations, and methods indicates the NEP 2020 intellectual environment.

42% of research examines policy and structural improvements, but less blended learning, governance, and transdisciplinarity. There is only one study, therefore 68% of the literature is conceptual and policy reviews. Research prioritizes theory (63%), then lacks proof (78%).

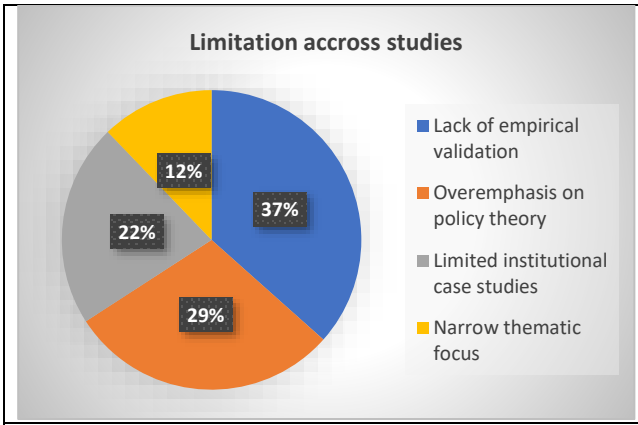
Category	Sub-category	Count	% of Total (n=19)	Observation
Year of Publication	2021	3	16%	Early conceptual discussions post-policy release
	2022	2	11%	Analytical and governance-focused works
	2023	4	21%	Comparative studies and blended learning focus emerge
	2024	7	37%	Peak research activity as implementation matured
	2025	1	5%	Very recent, mostly policy impact reflections
Research Focus	Policy & Structural Reforms	8	42%	Dominant theme, emphasizing broad reforms
	Governance & Leadership	2	11%	Institutional management and equity
	Multidisciplinary & Holistic Education	4	21%	Integration of disciplines and holistic learning
	Blended/Digital Learning	2	11%	Technology-enabled pedagogy still limited
	Challenges & Opportunities	3	16%	Critical reflections on gaps in implementation
Methodology	Conceptual/Policy Review	13	68%	Most papers remain theoretical
	Critical/Analytical Review	6	32%	Some deeper critiques but limited field data
	Empirical Comparative Study	1	5%	Jain et al. (2023) is the only empirical case study
Limitations Across Studies	Lack of empirical validation	15	78%	Highlights a major research gap
	Overemphasis on policy theory	12	63%	Few ground-level insights available
	Limited institutional case studies	9	47%	Regional impact not sufficiently explored
	Narrow thematic focus	5	26%	Some works focused only on libraries/pedagogy/governance



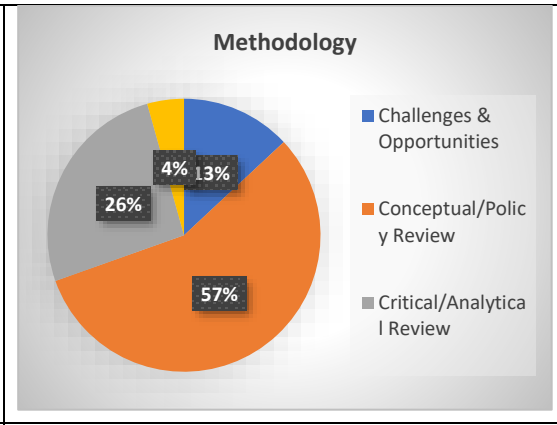
a. Research focus



b. Year of publication



c. Limitation across studies



d. Methodology

3. Research Methodology

India's school reform research is qualitative and quantitative. Policy research and content analysis of government documents, commission conclusions, and curriculum frameworks support such inquiries. Comparative education examines Indian changes alongside international models. Research methods including graduate and employer questionnaires have assessed employability results. Some education policy studies identified skill gaps using theme content analysis, while others questioned educators and industry leaders. This study uses secondary sources. Critical review of NEP 2020 provisions, skill gap and employability research synthesis, and global comparisons are needed. The descriptive and analytical technique finds policy vision-reality gaps and offers additional research.

NEP 2020 Implementation Framework: FDPs, Global Collaborations, Core Dao Vip Curriculum

3.1. Academic Empowerment FDPs

NEP 2020 requires faculty training in technology-driven, transdisciplinary, experiential teaching. School and higher education instructors' 90-hour FDPs will cover:

• AI, Blockchain, ML/DL, Web3.0 basics.
• 6th–university curriculum-aligned teaching modules.
• Python, Google Colab, ChatGPT, Gemini, Remix IDE, NFT platforms, decentralized exchanges.
• Aligned lesson preparation, project-based learning, and evaluation with NEP's flexibility and employability goals.

The FDP's AI–Blockchain training certifications fill the NEP 2020 faculty preparedness gap by providing conceptual clarity and practical fluency.

3.2. International AI/Blockchain Ventures

Second, strategic partnerships with multinational AI and Blockchain companies will boost NEP 2020's worldwide competitiveness. Collaborations with global EdTech companies, blockchain foundations, and AI startups would supply cutting-edge solutions, according to the proposal.

• Collaborators will promote CoreDaoVip curriculum for credibility and global benchmarking.

Through joint research, faculty exchange, and Indian student and teacher worldwide internships, explore global best practices.

• This collaboration connects NEP 2020 with mainstream US, Finnish, Singapore, Canadian, and UK policies on early AI integration, phenomenon-based learning, and lifetime upskilling.

3.3. University/Institutional CoreDaoVip Global Curriculum Adoption

CoreDaoVip Global Curriculum fits NEP 2020's transdisciplinary, experiential, and skill-oriented goals. AI, Blockchain, DeFi, NFTs, digital identity, and entrepreneurship will be implemented in schools, colleges, and universities.

• Provide experience with global platforms like Colab, Remix IDE, Opensea, and CoreDaoVip's decentralized learning tools.

Replace theoretical modules with capstone projects, simulations, and startup incubation in Class 6.

Create industry-ready AI engineers, blockchain developers, and digital entrepreneurs by graduation.

3.4. Events and outreach sustain engagement.

University best practices will be shared at events, hackathons, webinars, and research showcases like the yearly NEP-Core Dao Vip Summits to maintain momentum and encourage adoption.

Innovative student problems using AI and Blockchain for real-world solutions.

• Organized faculty-industry workshops for curriculum and case studies.
• Community awareness programs promoted digital literacy and inclusivity.

This will implement NEP 2020 improvements and boost India's knowledge ecosystem leadership. FDPs to empower faculty, global collaborations to bring cutting-edge expertise, institutional adoption of CoreDaoVip curriculum for future-ready education, and frequent events to promote sustainability and visibility achieve NEP 2020's goal.

4.NEP 2020 and bridging the skill gap

The skill imbalance is addressed in many NEP 2020 stipulations. Multidisciplinary, integrated four-year undergraduate programs with various exit points give vocational training flexibility. NEP 2020 teaches domain knowledge and transferable skills through arts, sciences, vocational, and professional education. Industrial and vocational training are NEP 2020 priorities. To obtain experience, students require internships and apprenticeships. Higher education should partner with industry to offer market-relevant curriculum.

Digital literacy and technology development are groundbreaking. NEP 2020 promotes AI, IoT, data science, blockchain, and machine learning through digital universities. Graduates should be ready for digital economy occupations. The policy supports NRF and institutional incubator research, innovation, and entrepreneurship. Skill development and regional language integration enhance inclusion in rural, indigenous, and disadvantaged communities.

5. Role of CoreDao Vip Global Curriculum in NEP 2020

NEP 2020 requires higher education to teach global industrial skills and theory. CoreDaoVip Global Curriculum backs NEP 2020. AI, Blockchain, Cloud Computing, Web 3.0, and Digital Finance connect academic learning to industry needs at CoreDaoVip. NEP 2020's modular, transdisciplinary curriculum and entry-exit points help students attain skill-based goals. CoreDaoVip meets NEP 2020 internship and apprenticeship requirements through projects, simulations, and industry partnerships. Global exposure and industry certifications improve Indian graduates' employability and close the higher education-labor market gap. CoreDaoVip's global perspective supports NEP 2020's goal of making India a competitive student hub. CoreDaoVip trains and empowers teachers. CoreDaoVip offers structured courses to help teachers adapt to current pedagogy and technology since NEP 2020 prioritizes teacher training and capacity building. Its digital-first approach gives diverse students advanced learning tools to address the urban-rural higher education gap. The CoreDaoVip Global Curriculum helps NEP 2020 fill India's talent gap. Advanced technology, global connections, and flexible and experiential learning boost Indian higher education graduates' employability and creativity.

6.Challenges in Implementation

Despite its goal, NEP 2020 has serious implementation challenges. State colleges sometimes lack resources for flexible transdisciplinary courses. Many educators are unprepared to teach new technologies or vocational courses, therefore faculty training and capacity building are crucial. Another concern is the digital gap, especially in rural and impoverished areas with poor internet and device access. Curriculum modification may be hindered by academic institutions. The policy's skill gap-bridging success is hard to measure without proper monitoring and evaluation.

7.Discussion and Future Plans

A new knowledge economy fits NEP 2020's goals and vision. It needs more industry-academia-government collaboration to succeed. Universities need outcome-based learning approaches that promote employability. Future research should evaluate graduates' employability after implementation. Digital universities, regional inequalities, and vocational training program inclusion must be examined.

8.Conclusion

A paradigm shift in Indian higher education, the National Education Policy 2020 aims to close the skill gap and equip students for 21st-century problems. It offers a comprehensive reform plan that emphasizes transdisciplinary learning, vocational integration, digital literacy, and research innovation. However, policy vision requires implementation capacity, faculty empowerment, and equal access. NEP 2020 could turn India into a worldwide knowledge and skill hub, using its population dividend to boost socio-economic progress, if certain issues are solved.

This structured comparison table shows how the Global Curriculum addresses CBSE/NCERT curriculum shortcomings:

Aspect	Limitations of CBSE/NCERT Curriculum	Solutions in CoreDaoVip Global Curriculum
Skill Orientation	Focus is primarily on theoretical knowledge, with minimal emphasis on industry-relevant skills such as AI, Blockchain, Cloud, and Web3.	Embeds **AI, Blockchain, Cloud Computing, DeFi, and Web3** into the core curriculum from middle school to higher education. Provides industry-standard certifications.
Pedagogy	Teacher-centered, exam-driven, and rote learning methods dominate. Limited focus on experiential and project-based learning.	Promotes **experiential, project-based, and problem-solving pedagogy** using tools like Google Colab, Remix IDE, and NFT platforms.
Industry Linkages	Weak collaboration between schools/universities and industry. Graduates often lack employability skills.	Built-in **industry partnerships and live projects** with global AI and Blockchain ventures ensure direct exposure to industry tools and practices.

Digital Integration	Digital literacy is limited to basic ICT; advanced technologies are absent.	Provides **hands-on training** in AI, Blockchain, DeFi, and Cloud tools, ensuring students are **future-ready** for the digital economy.
Flexibility & Interdisciplinarity	Rigid subject silos, minimal flexibility in choosing courses. Limited interdisciplinarity.	Follows **multidisciplinary and flexible pathways**, allowing integration of arts, sciences, and digital technologies in a unified curriculum.
Global Exposure	Minimal international benchmarking; curriculum remains nationally confined.	Curriculum aligned with **global best practices** (Finland's phenomenon-based learning, Singapore's SkillsFuture, USA/UK digital integration). Promotes **student/faculty exchange and global collaboration**.
Faculty Development	Limited structured Faculty Development Programs (FDPs) for new-age technologies.	Offers **continuous FDPs** to upskill educators in AI, Blockchain, and Cloud, empowering them as global trainers.
Entrepreneurship & Innovation	Limited focus on entrepreneurship, innovation, and incubation in early education.	Strong emphasis on **entrepreneurship, startup incubation, and innovation labs**, enabling students to become creators, not just job-seekers.
Inclusivity	Rural/remote learners face access barriers to modern digital education.	Digital-first model ensures **inclusive access** via decentralized platforms, reducing the **urban-rural education divide**.

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