Indian Knowledge Systems in NEP 2020: Policy, Practice and Challenges

Chandan Mandal

Ph. D Scholar, Department of Education, Kazi Nazrul University, Asansol,

Email: Chandan.edu95@gmail.com

Abstract:

The National Education Policy (NEP) 2020 marks a significant policy shift in India's education landscape, emphasizing the revival, integration, and promotion of Indian Knowledge Systems (IKS). This study explore the effectiveness of government policies—particularly the National Education Policy (NEP) 2020—in promoting, integrating, and institutionalizing Indian Knowledge Systems (IKS) within India's contemporary education landscape. There are also other objective to examine the effectiveness of government initiatives introduced under NEP 2020 to strengthen IKS across school and higher education. It examines policy provisions, implementation strategies, institutional frameworks, and outcomes related to curriculum development, research promotion, teacher training, and digital dissemination of traditional knowledge. Using a qualitative analysis of government documents, academic literature, and emerging case studies, the paper assesses how these measures have contributed to increasing awareness, academic legitimacy, and interdisciplinary engagement with IKS. Findings indicate that NEP 2020 has significantly elevated the visibility and academic legitimacy of Indian Knowledge Systems while fostering new opportunities for innovation, entrepreneurship, and cultural awareness. However, sustained progress requires greater investment in capacity building, quality assurance, and collaborative research ecosystems. The study concludes with policy recommendations aimed at strengthening the integration of IKS within India's education system to ensure its long-term relevance and contribution to national development.

Keywords: *Government Policies, Indian Knowledge System, NEP 2020, School Education, Higher Education.*

1. Introduction:

The Indian Knowledge System (IKS) is an organized and methodical approach to passing down information from one generation to the next (Khan & Sharma, 2024). Indian Knowledge Systems (IKS) represent a vast and diverse repository of indigenous intellectual traditions that have evolved over thousands of years, encompassing fields such as philosophy, linguistics, mathematics, astronomy, medicine, architecture, arts, ecology, agriculture, and social organization (Mandavkar, 2023). Despite their historical significance and global recognition, these knowledge traditions gradually lost prominence within India's mainstream education system during the colonial period and the decades that followed (Subba Rao, 2006). The dominance of Western epistemologies, combined with limited institutional support, resulted in the

marginalization of indigenous knowledge in formal curricula, research agendas, and academic discourse (Mandavkar, 2023).

The National Education Policy (NEP) 2020 marks a major paradigm shift in India's educational planning by explicitly acknowledging the value of Indian Knowledge Systems and calling for their systematic integration across school and higher education (Biswas, 2021). The policy emphasizes holistic learning, rootedness in culture, linguistic diversity, and interdisciplinary approaches—principles that resonate strongly with the ethos of IKS (Baral, 2024). Through initiatives such as the establishment of the Indian Knowledge Systems (IKS) division under the Ministry of Education, curriculum reforms, promotion of classical languages, funding for research, teacher training programs (Kumar & Kishor, 2025) and digital preservation projects, NEP 2020 seeks to revitalize IKS and position it as a credible and meaningful component of contemporary education (Jadon et al., 2025).

However, the implementation of these initiatives raises several critical questions regarding their effectiveness, reach, and sustainability (Sharma, 2024). While policy documents highlight ambitious goals, institutions often face challenges related to resource availability, faculty expertise, curriculum standardization, and balancing traditional knowledge with modern scientific frameworks (Amani, 2024).Understanding the real impact of these policy interventions is essential for assessing whether NEP 2020 is achieving its aims of promoting, integrating, and institutionalizing IKS within India's evolving educational landscape (Kumar & Kishor, 2025).

This research seeks to evaluate the extent to which government policies—especially NEP 2020—have influenced the revival and mainstreaming of Indian Knowledge Systems (Baral, 2024). It aims to analyse policy mechanisms, implementation practices, institutional responses, and emerging outcomes, thereby providing a comprehensive assessment of the opportunities and challenges involved in embedding IKS within contemporary education (Sharma & Awasthi, 2025). The study contributes to ongoing academic and policy debates on cultural preservation, educational reform, and the role of indigenous knowledge in national development (Amani, 2024).

2. Research Objectives:

➢ To evaluate the effectiveness of government policies—particularly the National Education Policy (NEP) 2020—in promoting, integrating, and institutionalizing Indian Knowledge Systems (IKS) within India's contemporary education landscape.

➢ To examine how NEP 2020 provisions support the revitalization and mainstreaming of Indian Knowledge Systems in school and higher education.

➢ To identify challenges, barriers, and gaps in the implementation of IKS policies under NEP 2020.

3. Research Methodology:

It is a qualitative and analytical method based on interdisciplinary literature and policy document reviews. For the collection of data in this study, information has been collected especially from secondary sources such as book chapters, scholarly journal, articles, review articles, books, research report, government reports and policy documents etc. A variety of websites and online journals were used to collect the materials. After their titles and abstracts were reviewed, a small number of papers were selected for further analysis in accordance with the current study's requirements. Numerous government documents and publications on NEP 2020 and IKS, as well as pertinent research articles and idea notes, were studied for this study. Using a qualitative analysis of government documents, academic literature, and emerging case studies, the paper

assesses how these measures have contributed to increasing awareness, academic legitimacy, and interdisciplinary engagement with IKS. Content analysis, thematic analysis and discourse analysis techniques were used for data analysis.

4. Findings and Discussion:

4.1. Government policies—particularly the National Education Policy (NEP) 2020—in promoting, integrating, and institutionalizing Indian Knowledge Systems (IKS)

National Education Policy (NEP) 2020:

The New Education Policy (NEP) 2020 places a strong emphasis on IKS as a means of advancing comprehensive and culturally grounded education. This includes classes that promote holistic development and cultural pride, such as yoga, Vedic mathematics, Ayurveda, and classical arts (Sharma & Awasthi, 2025). NEP 2020 is the most significant policy for mainstreaming IKS. Curricular Integration: Incorporates Indian sciences (maths, astronomy, and metallurgy), Ayurveda, Yoga, classical arts, folklore, environmental knowledge, and ethical-philosophical systems. Encourages experiential learning through local crafts, traditional technologies, and community knowledge. Revitalizes Sanskrit and promotes classical and regional languages as carriers of cultural and scientific knowledge. Encourages multilingual education to preserve linguistic knowledge systems. Established to develop curriculum, fund research, train faculty, and foster institutional collaborations. Teacher Education and Training: Integration of IKS pedagogy in teacher-education programs (B.Ed., in-service modules). Introduces IKS Chairs, interdisciplinary departments, and research centers. Encourages universities to offer credit-based courses in IKS-related subjects.

National Curriculum Framework (NCF) 2023:

Aligned with NEP 2020, NCF 2023 operationalizes IKS in school curricula. Introduces IKS themes in NCERT textbooks. Incorporates classical Indian mathematicians, sciences, art traditions, and environmental knowledge. Embedded local knowledge and cultural context into school learning experiences.

Ministry of Education and AICTE Initiatives:

AICTE has funded numerous IKS research centers in universities and engineering colleges. Projects cover Vastu-shastra, traditional water systems, classical mathematics, ancient metallurgy, and more. SWAYAM, DIKSHA, and PM e-VIDYA now host IKS-related courses. National Digital Library includes IKS repositories. Support for translating classical texts (Sanskrit, Prakrit, Tamil, and Pali) into modern Indian languages and English (MHRD, 2019).

Ministry of AYUSH Policies:

AYUSH plays a central role in institutionalizing traditional medical systems. Sharma and Dwivedi (2025) argues that upgradation of Ayurveda, Yoga, Unani, Siddha, and Sowa-Rigpa education. Standardized curricula and accreditation for AYUSH colleges. Support for research in traditional medicine and wellness sciences.

Skill India Mission and Vocational Education:

Traditional vocational knowledge is part of IKS. Recognition and certification of traditional artisanship (weaving, pottery, metalwork). Integration of local crafts and indigenous technology into school vocational modules. National Skills Qualification Framework (NSQF) includes traditional skills (MHRD, 2019).

Ek Bharat Shreshtha Bharat & Cultural Education Program:

Promote inter-state cultural exchange. Encourage learning of regional arts, festivals, ecology, and oral traditions. Introduce students to diverse indigenous knowledge systems across India.

Samagra Shiksha Abhiyan (SSA):

Funds states to integrate local-art, craft-based, and eco-cultural knowledge into school programs.

National Mission on Education through ICT (NMEICT) & Digital Platforms:

SWAYAM, DIKSHA, and PM e-VIDYA now host IKS courses. MOOCs on Ayurveda, classical mathematics, vastu-shastra, and Indian philosophy broaden accessibility. Digital preservation of manuscripts (Chattopadhyay, 2025). Online courses on Indian philosophy, classical arts, Ayurveda, ecology, and Yoga. Virtual labs for traditional scientific and technological knowledge.

Ministry of Culture and Allied Schemes:

Intangible Cultural Heritage (ICH) Scheme: Identifies, documents, and conserves traditional art forms, crafts, and oral knowledge. Guru–Shishya Parampara Scheme: Revitalizes traditional performing arts education. Institute for Manuscripts and Archival Research: Preserves ancient texts, which act as primary sources for IKS studies. Heritage Education Programs: Introduced in schools and museums to build awareness of India's civilizational contributions (Ashokkumar et al., 2025).

UGC Policies and Guidelines:

Guidelines for integrating IKS into university curricula. Mandates inclusion of IKS topics in undergraduate syllabi (e.g., environmental wisdom, Indian logic, classical scientific heritage) (Naveen, 2023). Encourages interdisciplinary research connecting modern and traditional systems.

State-Level Education Policies:

Karnataka, Kerala, Maharashtra, Gujarat, and Tamil Nadu have introduced: local language learning, regional cultural modules, and community knowledge-based school programs, indigenous agricultural and ecological education.

A constellation of national-level policies (NEP 2020, NCF 2023, AYUSH policies, digital mission) and institutional frameworks (AICTE IKS Division, UGC guidelines, research centers) is reshaping India's educational landscape by systematically embedding Indian Knowledge Systems. While the government has created a strong foundation, the long-term success of IKS institutionalization requires sustained faculty development, scholarly rigor, equitable implementation, and interdisciplinary innovation.

4.2 How NEP 2020 Supports the Revitalization and Mainstreaming of Indian Knowledge Systems (IKS):

The National Education Policy (NEP) 2020 positions Indian Knowledge Systems (IKS) as a central component of the future of education in India. It does so by promoting cultural rootedness, multidisciplinary learning, and knowledge diversity, while aligning them with global standards.

Curriculum Integration of IKS:

NEP 2020 mandates integrating Indian art, culture, traditions, and languages into curricular and co-curricular activities. Emphasis on local contexts, such as traditional farming practices, storytelling, indigenous games,

yoga, folk arts, and craft traditions. Encourages experiential learning through regional and tribal knowledge systems, promoting context-based understanding. Universities are guided to develop courses on Indian history, philosophy, culture, classical literature, sciences, and arts. Establishment and encouragement of departments in Sanskrit, Indian languages, Ayush systems, Indian philosophy, and traditional sciences like astronomy, mathematics, metallurgy, architecture, ecology, and linguistics. Integration of IKS in multidisciplinary curriculum structures.

Promotion of Indian Languages:

Three-Language Formula encourages learning in regional languages, strengthening linguistic heritage and access to local knowledge. Mother-tongue instruction in foundational and preparatory years supports transmission of indigenous knowledge embedded in language. NEP 2020 promotes offering undergraduate and postgraduate courses in Indian languages. Development of high-quality textbooks and e-learning resources in classical and modern Indian languages helps mainstream indigenous knowledge.

Establishment of IKS Research and Resource Centres:

Use of State Councils of Educational Research and Training (SCERTs) and NCERT to develop textbooks and materials incorporating IKS. Creation of digital content on local heritage and eco-cultural knowledge for the DIKSHA platform. Establishment of a dedicated Indian Knowledge Systems Division under AICTE. Creation of research centres focusing on indigenous STEM—ancient mathematics, metallurgy, agriculture, environmental conservation, health traditions, architecture (e.g., Vastu), etc. Funding support for projects documenting traditional knowledge and developing innovative modern applications.

Multidisciplinary and Holistic Education Framework:

NEP 2020's flexible, liberal education model supports IKS through: Choice-based credit systems enabling students to take courses in Sanskrit, traditional music, philosophy, yoga, or ecology along with modern disciplines. Encouragement of value-based education, including ethics, Indian philosophical traditions, and humanistic approaches from ancient texts. Inclusion of crafts and vocational knowledge such as handloom weaving, traditional medicine, and local technology practices.

Revitalizing Arts, Culture, and Heritage

Mandates exposure to Indian arts, classical languages, performing traditions, and local histories. Encourages schools to serve as cultural hubs, preserving local artistic communities. Strengthening universities and academies that focus on Indian arts, music, dance, Sanskrit literature, oral traditions, epics, and folklore. Support for heritage universities and centres dedicated to archaeological studies and ancient manuscripts.

Yoga, Health, and Well-being:

NEP 2020 recognizes yoga and traditional health practices as integral to holistic development: Schools must include yoga, meditation, and mind-body practices as part of health and physical education. Higher educational institutions are encouraged to conduct research on Ayush systems and integrate traditional health science knowledge.

Digital Preservation and Dissemination:

NEP 2020 promotes digitization of manuscripts, oral histories, and classical texts through national platforms like DIKSHA, e-PG Pathshala, and digital libraries. Use of technology to document, store, and teach IKS to wider audiences.

Teacher Capacity Building:

National Curriculum Framework for Teacher Education (NCF-TE) includes training on Indian pedagogy traditions, storytelling, and local ecological knowledge, arts-integrated learning, teachers are encouraged to use place-based education, grounded in traditional knowledge. Faculty development programs for university teachers on IKS courses, research methodology, and curriculum design.

Community and Local Knowledge Integration:

Encourages partnerships with local communities, artisans, traditional knowledge holders, farmers, healers, etc. School complexes and HEIs are asked to collaborate with local experts for lectures, demonstrations, and hands-on learning.

Global Recognition and Academic Positioning:

NEP 2020 aims to position India as a global centre for authentic knowledge, where: IKS serves as a foundation for innovative research in science, sustainability, agriculture, engineering, climate studies, and philosophy. India promotes its knowledge systems internationally through exchange programs and collaborations.

4.3 Challenges, Barriers, and Gaps in Implementing IKS under NEP 2020:

Although NEP 2020 places strong emphasis on Indian Knowledge Systems (IKS), its actual integration across school and higher education faces multiple structural, pedagogical, administrative, and sociocultural challenges. These gaps slow down the mainstreaming and revitalization of IKS.

Structural and Institutional Challenges:

Many schools and colleges lack dedicated departments, centres, or infrastructure to support IKS-based teaching and research. Limited availability of academic institutions offering specialized IKS courses, especially in STEM-integrated fields (astronomy, metallurgy, traditional architecture, ecology). NCERT, SCERTs, NCF, UGC, AICTE, and State Departments often work in silos. Absence of clear implementation roadmaps leads to unequal or slow adoption across states.

Curriculum and Pedagogical Challenges:

Scarcity of high-quality textbooks, modules, digital content, and teacher guides on IKS. Existing content in many schools remains theoretical rather than experiential. Singh (2025) argues that teachers often find it challenging to integrate ancient mathematical, ecological, or philosophical concepts with modern science curricula. Lack of standardized pedagogical frameworks for interdisciplinary teaching. Adding IKS content without restructuring existing syllabi may lead to curriculum overload, especially at school level.

Human Resource and Teacher-Related Barriers:

Host teachers have limited exposure to classical Indian knowledge traditions. Teacher education programs have not been fully updated to include IKS pedagogy. Capacity-building programs are occasional, fragmented, and not large-scale. Few master trainers exist to mentor teachers in local knowledge integration.

Research and Knowledge Production Gaps:

Insufficient empirical research on: pedagogical effectiveness of IKS, integration models, comparative knowledge frameworks, makes policymakers hesitant to allocate sustained funding. Many oral traditions,

tribal knowledge systems, and community practices remain undocumented. Absence of standardization limits their academic acceptance.

Sociocultural and Perception-Related Barrier:

Some stakeholders view indigenous knowledge as outdated or inferior to Western knowledge systems. Urban and English-medium schools often resist changes due to elite preferences. Many parents prioritize global mobility and English-based curricula, reducing demand for IKS-related courses. Concerns about selective or biased representation of ancient knowledge traditions. Fear of promoting cultural essentialism instead of academic rigor.

Language and Accessibility Barriers:

While NEP promotes mother-tongue learning, IKS materials are often unavailable in regional languages. Translation of classical texts (Sanskrit, Pali, Prakrit, Tamil, and Persian) into contemporary languages is inadequate. DIKSHA and digital IKS repositories are inaccessible in rural/tribal areas due to limited connectivity.

Implementation and Policy-Level Gaps:

NEP mandates IKS inclusion but does not provide: detailed KPIs, monitoring templates, assessment standards, and accountability mechanisms. States vary widely in political will, funding, and teacher preparedness. Some states have incorporated IKS quickly; others have not begun alignment with NEP. IKS-related projects often rely on temporary grants. No sustained long-term funding model for curriculum development, research, or community collaboration.

Challenges in Community Participation:

Collaboration with artisans, healers, farmers, tribal elders, and historians is not systematized. Compensation models for community experts are unclear or absent. Urban schools struggle to connect with local ecosystems and traditional skills. Loss of traditional practices in cities creates implementation difficulties.

Higher Education-Specific Gaps:

Universities often silo IKS into departments like Sanskrit or Philosophy, ignoring scientific and technical knowledge component. Lack of integration of IKS with: modern healthcare, sustainable agriculture, environmental conservation, engineering design, Minimal commercialization or innovation-based research built on IKS principles. NAAC/NBA frameworks are not fully updated to evaluate IKS-based programs.

School Education-Specific Gaps:

Many schools prioritize exam-oriented learning, leaving little room for experiential IKS activities. Chowdhury and Deb (2024) argues that textbooks do not always reflect the diverse regional knowledge systems of India. Tribal knowledge, ecological practices, and folk sciences are still marginal.

5. Conclusion:

The integration of Indian Knowledge Systems (IKS) into contemporary education through the National Education Policy (NEP) 2020 marks a significant shift in India's approach to knowledge, identity, and cultural heritage. This study's evaluation of government policies demonstrates that NEP 2020 has laid a strong conceptual and structural foundation for mainstreaming IKS by emphasizing multidisciplinary learning, mother-tongue education, experiential pedagogies, and the institutionalization of IKS through

bodies such as the IKS Division under the Ministry of Education. These policy provisions reflect a deliberate attempt to revive, preserve, and promote India's diverse knowledge traditions in a manner that aligns with modern academic and global standards. However, the policy-to-practice transition reveals a mixed landscape. While progress is visible—particularly in curriculum frameworks, research initiatives, and institutional collaborations—implementation remains uneven across states, institutions, and disciplines. Challenges such as limited trained faculty, inadequate resource materials, insufficient funding in early years, and resistance stemming from unfamiliarity or misconceptions about IKS impede full realization of policy goals. Additionally, the lack of standardized pedagogical models and assessment frameworks continues to create operational gaps. Despite these barriers, NEP 2020 has undeniably catalyzed a national conversation on the relevance and legitimacy of IKS in education. Its impact is evident in the rising academic interest, expanding research projects, and growing acceptance of indigenous knowledge as a valid and valuable domain of inquiry. For sustained success, future efforts must focus on capacity building, curriculum co-creation with knowledge holders, development of high-quality bilingual resources, and the establishment of robust evaluation mechanisms.

Overall, the findings suggest that NEP 2020 represents a transformative step toward re-centering Indian Knowledge Systems within the national education framework. While still a work in progress, the policy has opened pathways for a more inclusive, culturally grounded, and globally competitive education system. Continued commitment, collaborative action, and evidence-based implementation will be crucial for ensuring that IKS becomes an integral and enduring component of India's educational future.

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