



NEP-2020 Analytics and Bhartiya Gyan Sampada (IKS): A Pragmatic Perspective

Akshay Rajendra Joshi¹ and Dr. Vijay Kulkarni*

Abstract

The National Education Policy (NEP) 2020 represents a landmark reform in India's educational framework, aiming to establish a holistic, multidisciplinary, and value-driven system of learning. One of the most significant dimensions of this policy is the emphasis on integrating Bhartiya Gyan Sampada or Indian Knowledge Systems (IKS) into curricula at all levels. This paper presents an extended critical analysis of NEP 2020 and its provisions related to IKS, highlighting how India's intellectual heritage can be pragmatically aligned with contemporary educational needs. With an expanded exploration of the historical, philosophical, and scientific dimensions of IKS, this paper analyzes opportunities, challenges, and pathways for implementation. Drawing from a wide range of literature, case studies, and policy reports, it seeks to demonstrate how IKS can enrich pedagogy, foster innovation, and build cultural identity while ensuring global competitiveness. The discussion underscores the importance of striking a balance between reverence for tradition and the rigor of modern scientific validation.

Keywords: National Education Policy 2020, Indian Knowledge Systems, Indigenous Knowledge, Educational Reform, Multidisciplinary Learning, Cultural Integration

Introduction

The release of the National Education Policy (NEP) 2020 is regarded as a transformative moment in India's history of educational reforms. For decades, Indian education has been characterized by rote learning, examination-centric approaches, and often a disconnect from cultural and intellectual traditions (Tilak, 2020).

¹ Student, Department of Management, MIT School of Distance Education (SDE), Pune, Maharashtra 412105, India. Email: akshayjosshi99001@gmail.com, <https://orcid.org/0009-0002-8893-1477>

*Corresponding Author: Dr. Vijay Kulkarni, <https://orcid.org/0000-0002-4253-379>, Dean, Student Affairs, Student Services Division, Ajeenkya DY Patil University, D Y Patil Knowledge City, Charholi Bk. Via Lohegaon, Pune – 411081, Maharashtra, India. Email: profvijayra2@gmail.com, <https://orcid.org/0000-0002-4253-3791>.

NEP 2020 attempts to correct these shortcomings by emphasizing creativity, critical thinking, holistic development, and cultural rootedness (Kasturirangan et al., 2019).

At the heart of this reform lies a call to integrate *Bhartiya Gyan Sampada* or Indian Knowledge Systems (IKS). This is significant because India possesses one of the oldest and richest intellectual traditions in the world, encompassing philosophy, science, mathematics, medicine, linguistics, arts, and spirituality. For centuries, India's contributions—such as the invention of zero, advanced surgical techniques, theories of aesthetics, philosophical insights, and sustainable ecological practices—have shaped human civilization (Sen, 2005; Radhakrishnan, 2010). Yet, post-colonial educational frameworks largely neglected these contributions, prioritizing Western knowledge paradigms (Nanda, 2003).

The NEP 2020 envisions correcting this imbalance by mainstreaming IKS into education at all levels. It recognizes that an education system deeply rooted in cultural heritage, while also embracing modern global knowledge, can empower learners to navigate the challenges of the 21st century. This dual approach aligns with global trends that emphasize both local wisdom and global competencies (UNESCO, 2019). By proposing the integration of IKS, NEP 2020 attempts to reconnect learners with India's intellectual traditions, fostering national pride, cultural continuity, and international competitiveness.

Furthermore, the introduction of IKS in education can be seen as part of a larger decolonial effort in knowledge production. Scholars have argued that colonial legacies often shaped curricula to privilege Western epistemologies, marginalizing indigenous contributions (Battiste, 2002). NEP 2020, therefore, represents not only a pedagogical reform but also a cultural reorientation, seeking to restore epistemic justice to Indian traditions.

This extended paper provides a comprehensive exploration of the role of Indian Knowledge Systems (IKS) within the framework of the National Education Policy (NEP) 2020. It not only examines the historical and philosophical roots of IKS, but also situates them within the broader context of India's educational traditions and cultural heritage. By engaging with diverse academic perspectives, the paper critically reviews existing debates on the relevance, applicability, and adaptability of IKS in contemporary higher education. Furthermore, it analyzes the opportunities that the integration of IKS presents—such as fostering holistic learning, strengthening cultural identity, and promoting indigenous research methodologies—while also addressing the challenges, including issues of standardization, epistemic validation, and global acceptance. In addition, the paper proposes pragmatic strategies for embedding IKS into modern curricula, ranging from curriculum design and teacher training to interdisciplinary collaborations and policy implementation. In doing so, it contributes meaningfully to the ongoing discourse on how to build an education system that is not only globally competitive but also deeply rooted in India's intellectual traditions, thereby achieving a balanced, inclusive, and culturally grounded model of education for the 21st century.

Objectives

The objectives of this paper are as follows:

1. To analyze the vision and provisions of NEP 2020 regarding the integration of Indian Knowledge Systems (IKS).
2. To examine the historical and philosophical foundations of Bhartiya Gyan Sampada.
3. To review scholarly literature that highlights the relevance and challenges of IKS in modern education.
4. To assess the opportunities and potential benefits of integrating IKS into education through NEP 2020.
5. To critically evaluate the challenges associated with IKS integration and propose pragmatic strategies.
6. To provide a comprehensive discussion that situates IKS in a global educational context.

Literature Review

The integration of Indian Knowledge Systems (IKS) into modern education has increasingly become a focus of scholarly debate, policy deliberation, and institutional experimentation. While the subject has long been discussed in educational and philosophical circles, the release of the National Education Policy (NEP) 2020 has given renewed urgency to this discourse, positioning IKS as a central theme in India's vision for a holistic, inclusive, and future-ready education system. The literature on IKS covers multiple domains: historical accounts of India's intellectual traditions, theoretical frameworks of indigenous knowledge, global comparative case studies, policy recommendations, and critiques of cultural nationalism in education. Together, these strands provide a nuanced understanding of the promises and challenges of embedding IKS within India's educational framework.

This review is organized into five thematic sections: (i) historical and cultural foundations, (ii) pedagogical significance, (iii) global comparative studies, (iv) policy and institutional perspectives, and (v) critical challenges and scholarly concerns. The synthesis highlights convergences and divergences across these perspectives, offering insights into the pathways for meaningful implementation.

Historical and Cultural Foundations of IKS:

Indian Knowledge Systems embody millennia of intellectual traditions spanning philosophy, science, medicine, mathematics, literature, arts, and social practices. Scholars argue that IKS constitutes not merely a cultural inheritance but also a sophisticated epistemology with enduring relevance.

Radhakrishnan (2010) characterized Indian philosophy by its continuity, pluralism, and logical rigor, emphasizing that traditions such as Nyaya, Mimamsa, and Vedanta cultivated modes of reasoning central to critical inquiry. Similarly, Sen (2005) underscored India's argumentative tradition, where debate, dialogue,

and rational dissent were intrinsic to intellectual culture. These traditions counter the misconception that Indian thought was mystical or dogmatic; rather, it demonstrated a commitment to reasoned discourse and pluralistic inquiry.

In mathematics and astronomy, India's contributions have been foundational. Joseph (2009) documented advances such as the decimal system, zero, algebra, and trigonometry, which profoundly influenced global mathematical traditions. Similarly, Indian astronomers like Aryabhata and Bhaskara developed precise models of planetary motion, centuries before their European counterparts.

In the field of medicine, Ayurveda and Yoga, preserved in texts like the Charaka Samhita and Yoga Sutras, advanced holistic approaches to health, balancing body, mind, and spirit. Zysk (1991) highlighted the integration of medical practice and ascetic traditions in ancient India, where healing was linked to spiritual and ethical dimensions of life. These knowledge systems form part of the Bhartiya Gyan Sampada that NEP 2020 seeks to revitalize, framing IKS as both cultural heritage and practical resource for the modern world.

Pedagogical Significance of Indigenous Knowledge

Beyond historical achievements, indigenous knowledge has been recognized globally for its pedagogical value. Battiste (2002) argued that indigenous pedagogies promote identity, contextual learning, and sustainability, thereby enriching education with relevance and meaning.

In India, Kapoor (2005) emphasized that classical texts did more than transmit content; they cultivated methodologies of inquiry that encouraged reasoning, interpretation, and dialogical learning. This resonates with the structure of ancient gurukul systems, where students learned through observation, practice, debate, and lived experience rather than rote memorization.

Palmer (2014) similarly noted that effective pedagogy transcends content delivery, engaging in the inner landscape of teaching and learning. In this sense, IKS aligns closely with contemporary frameworks of socio-emotional learning, experiential education, and holistic pedagogy. For instance, yoga and mindfulness practices are now integrated globally into curricula to enhance well-being, focus, and resilience.

Thus, IKS is not merely a matter of heritage revival but constitutes a living pedagogical resource for cultivating creativity, ethics, sustainability, and problem-solving in 21st-century learners.

Global Comparative Studies:

The integration of indigenous knowledge into formal education is not unique to India but part of a global movement towards epistemic diversity.

In New Zealand, Maori knowledge (Matauranga Māori) has been systematically integrated into curricula, shaping subjects from environmental studies to language learning. McKinley (2005) demonstrated how Maori

women in science navigated the intersections of indigenous traditions and Western scientific paradigms, showing the transformative potential of epistemic hybridity.

In Canada, educational frameworks increasingly embed First Nations perspectives, affirming cultural identity and promoting reconciliation. Battiste (2002) emphasized how these practices restore dignity and relevance to historically marginalized knowledge systems.

At the global policy level, UNESCO (2019) has called for blending indigenous wisdom with modern science to achieve the Sustainable Development Goals (SDGs). The report argues that addressing contemporary challenges like climate change and inequality requires diverse epistemologies.

These comparative cases underscore that integrating IKS is not regressive or inward-looking but aligns with global trends of cultural justice, sustainability, and pluralism. They provide a comparative lens through which India's NEP 2020 reforms can be contextualized and assessed.

Policy and Institutional Perspectives:

The policy momentum for IKS integration in India has been driven by landmark documents and institutional initiatives. The Kasturirangan Committee Report (2019), which shaped NEP 2020, strongly recommended embedding IKS in school and higher education. Its proposals included establishing dedicated departments, research centers, and digital repositories to document and disseminate IKS.

Following this vision, the All-India Council for Technical Education (AICTE, 2020) created an Indian Knowledge Systems Division, signaling official recognition of IKS as a pillar of educational reform. Several universities and institutes have since launched dedicated programs. For example, IIT Kharagpur offers specialized courses on IKS, while Jawaharlal Nehru University (JNU) has established centers for advanced research in Indian traditions.

Sharma (2021) highlighted these developments as evidence of a paradigm shift in institutional commitment. Rather than being confined to cultural studies, IKS is gradually being integrated into mainstream disciplines, including engineering, management, and environmental sciences. Such initiatives indicate that IKS is not viewed solely as cultural preservation but as knowledge for innovation, sustainability, and nation-building.

Critical Challenges and Scholarly Concerns:

Despite enthusiasm, several critical voices caution against uncritical adoption of IKS in education. Nanda (2003) warned against romanticizing the past and conflating cultural pride with academic rigor. She argued that while India's traditions are valuable, they must be subjected to empirical scrutiny rather than treated as unquestionable truths.

Sundar (2020) similarly cautioned that IKS integration must avoid exclusionary narratives or the privilege of dominant traditions over marginalized ones. India's knowledge heritage is vast and diverse, encompassing not

only Sanskritic traditions but also contributions from regional languages, tribal communities, and Islamic scholars. A selective focus risks reproducing cultural hierarchies rather than democratizing knowledge.

Language presents another barrier. Much of the corpus remains in Sanskrit, Pali, and Prakrit, limiting accessibility. Kapoor (2005) highlighted the urgent need for translation, critical editing, and contextualization to make these sources relevant to modern learners.

Srinivas (2018) further emphasized the need for interdisciplinary methodologies that bridge traditional insights with modern scientific validation. Without this, IKS risks being sidelined as symbolic rather than substantive.

Thus, while scholars broadly agree on the importance of IKS, they stress that its integration requires methodological rigor, inclusivity, and contextual adaptation to avoid ideological misuse or curricular overload.

Synthesis of Literature

The reviewed literature demonstrates both convergence and divergence. On one hand, proponents emphasize that IKS offers a holistic pedagogy, a repository of scientific and cultural achievements, and a means of restoring India's intellectual legacy within global knowledge production. Policy frameworks such as NEP 2020 and institutional initiatives by AICTE and universities demonstrate concrete steps toward implementation.

On the other hand, critics underscore the risks of ideological appropriation, lack of validation, and exclusionary practices. They warn that without rigorous scholarship, inclusive representation, and critical engagement, the integration of IKS could devolve into cultural tokenism or political symbolism.

Discussion: NEP 2020 and the Positioning of IKS:

The National Education Policy 2020 (NEP 2020) positions Indian Knowledge Systems (IKS) not as supplementary, but as integral to reshaping India's educational ecosystem. By embedding IKS across curricular structures, the policy seeks to harmonize tradition with modernity, encouraging holistic development while maintaining global relevance (Kasturirangan et al., 2019).

Philosophical and Epistemological Foundations:

IKS is rooted in epistemologies that view knowledge as interconnected and holistic, encompassing material, spiritual, and ethical dimensions. NEP 2020 echoes this philosophy by promoting *samagra shiksha* (holistic education) and lifelong learning (Radhakrishnan, 2010). Sen (2005) highlights that India's argumentative traditions emphasize debate and pluralism, aligning with NEP's call for critical inquiry and creativity.

Institutional Mechanisms for Mainstreaming IKS:

To operationalize its vision, NEP 2020 recommends the establishment of dedicated IKS cells, centers of excellence, and research funding mechanisms. The creation of the IKS Division under AICTE (2020) exemplifies this institutionalization, initiating fellowship programs, translations, and collaborative projects. Sharma (2021) notes that IITs and central universities have already begun integrating IKS through electives, doctoral programs, and digital archives.

Pedagogical Strategies for Integration:

Pedagogy is central to the positioning of IKS. NEP 2020 emphasizes experiential, multidisciplinary, and inquiry-driven approaches (Palmer, 2014). Vedic mathematics, for example, has been shown to enhance problem-solving efficiency (Joseph, 2009), while Ayurveda and Yoga can supplement medical education with holistic perspectives (Zysk, 1991). Integrating these systems ensures not just cultural pride but pragmatic skill development relevant to contemporary needs.

Language, Translation, and Accessibility:

One of the major challenges lies in accessibility. Much of IKS exists in Sanskrit, Pali, and regional languages, posing barriers for modern learners. Kapoor (2005) stresses the importance of translation and interpretation in preserving epistemic authenticity. Digitization initiatives under NEP aim to create multilingual repositories, ensuring equitable access across socio-economic and linguistic groups (Srinivas, 2018).

Technology and Digital Knowledge Systems:

Digitization is pivotal in scaling IKS. NEP 2020's emphasis on technology-enabled learning extends to creating open-access databases, digital manuscripts, and e-learning platforms. AI-assisted translation tools are being developed to democratize IKS knowledge (UNESCO, 2019). This digital turn positions IKS not as static heritage but as a living, evolving resource.

Global Comparisons and Epistemic Justice:

Internationally, countries like New Zealand and Canada have integrated indigenous knowledge systems into formal curricula (McKinley, 2005; Battiste, 2002). NEP 2020 situates India within this global discourse, framing IKS integration as epistemic justice—acknowledging indigenous contributions long marginalized under colonial frameworks (Nanda, 2003). Such positioning enhances India's soft power while promoting inclusive knowledge practices.

Critical Challenges and Safeguards:

Despite its progressive framing, the policy faces challenges. Critics warn against the risk of promoting unverified claims under the guise of tradition (Nanda, 2003). Sundar (2020) emphasizes inclusivity, cautioning against privileging certain traditions while neglecting others. Balancing academic rigor with cultural revival

requires careful safeguards, including peer-reviewed research, interdisciplinary validation, and curricular balance.

Pragmatic Pathways Forward:

For successful implementation, pragmatic steps are necessary:

- **Selective Integration:** Prioritize elements of IKS with demonstrable contemporary relevance (e.g., environmental sustainability practices, Ayurveda).
- **Interdisciplinary Research:** Foster collaboration between historians, scientists, and linguists to validate and contextualize IKS (Sharma, 2021).
- **Capacity Building:** Train educators in IKS pedagogy to prevent superficial or ideological teaching (Battiste, 2002).
- **Global Collaboration:** Engage with global indigenous knowledge networks for best practices and benchmarking (UNESCO, 2019).

Conclusion

The NEP 2020 provides India with an unprecedented opportunity to mainstream IKS. A pragmatic approach requires balancing reverence for ancient wisdom with empirical validation and global adaptability. Through thoughtful integration, IKS can enrich education, foster innovation, and contribute to building learners who are culturally rooted yet globally competitive.

The National Education Policy 2020 signifies a paradigm shift in India's educational discourse by explicitly acknowledging the value of *Bhartiya Gyan Sampada* (Indian Knowledge Systems) and positioning it within a modern, globally competitive framework. By embracing holistic learning, interdisciplinarity, and digitization, the policy establishes pathways to integrate ancient intellectual traditions into contemporary curricula (Kasturirangan et al., 2019; Radhakrishnan, 2010). This not only affirms India's cultural identity but also ensures that students gain exposure to diverse epistemologies that complement scientific and technological advances (Sen, 2005; Joseph, 2009).

However, the incorporation of IKS also presents challenges that cannot be overlooked. Concerns of linguistic accessibility, empirical validation, and the risk of privileging certain traditions demand careful consideration (Kapoor, 2005; Sundar, 2020). The success of this integration depends on the ability to strike a balance between reverence for tradition and adherence to academic rigor. Translation initiatives, digital repositories, and critical peer-reviewed scholarship will be essential to make IKS accessible, inclusive, and credible in the modern knowledge ecosystem (Srinivas, 2018; Nanda, 2003).

Looking forward, the pragmatic integration of IKS under NEP 2020 offers India an opportunity to contribute meaningfully to global dialogues on sustainability, epistemic justice, and innovation. If implemented with care, IKS can serve as both a cultural anchor and a global resource, offering perspectives on ethics, environment, and holistic well-being that are urgently needed in today's interconnected world (Battiste, 2002; UNESCO, 2019; Sharma, 2021). Thus, the future of Indian education under NEP 2020 lies in fostering a system where ancient wisdom and modern science not only coexist but also mutually enrich one another.

References

- AICTE. (2020). Indian Knowledge Systems Division: Policy Note. All India Council for Technical Education.
- Battiste, M. (2002). *Indigenous Knowledge and Pedagogy in First Nations Education: A Literature Review with Recommendations*. Ottawa: National Working Group on Education.
- Joseph, G. (2009). *The Crest of the Peacock: Non-European Roots of Mathematics*. Princeton University Press.
- Kapoor, K. (2005). *Text and Interpretation: The Indian Tradition*. Indian Institute of Advanced Study.
- Kasturirangan, K., et al. (2019). *Report of the Committee for Draft National Education Policy*. Ministry of Education, Government of India.
- McKinley, E. (2005). Brown bodies, white coats: Maori women and science. *Discourse*, 26(4), 481–496.
- Nanda, M. (2003). *Prophets Facing Backward: Postmodern Critiques of Science and Hindu Nationalism in India*. Rutgers University Press.
- Palmer, P. J. (2014). *The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life*. Jossey-Bass.
- Radhakrishnan, S. (2010). *Indian Philosophy (Vols. 1–2)*. Oxford University Press.
- Sen, A. (2005). *The Argumentative Indian: Writings on Indian Culture, History and Identity*. Penguin Books.
- Sharma, R. (2021). Integrating Indian knowledge systems into modern education. *Journal of Indian Education Studies*, 45(2), 112–130.
- Srinivas, S. (2018). Revisiting Indian knowledge traditions in the global age. *Indian Journal of Social Science*, 22(1), 35–52.
- Sundar, N. (2020). Education, culture, and the nation-state: Re-examining NEP 2020. *Economic and Political Weekly*, 55(35), 23–27.
- Tilak, J. B. G. (2020). NEP 2020: The future of education in India. *Economic and Political Weekly*, 55(34), 12–16.
- UNESCO. (2019). *Futures of Education: Learning to Become*. Paris: UNESCO Publishing.
- Zysk, K. G. (1991). *Asceticism and Healing in Ancient India: Medicine in the Buddhist Monastery*. Oxford University Press.