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Integrating the Indian Knowledge System into Education through NEP-2020: Challenges and Opportunities

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Abstract:

The National Education Policy (NEP) 2020 marks a significant shift in India's educational framework by emphasizing the integration of the Indian Knowledge System (IKS) into formal education. Rooted in India's rich intellectual traditions, IKS encompasses diverse fields such as philosophy, science, mathematics, medicine, arts, and ethics, offering a holistic approach to learning. This paper aims to study the opportunities and challenges associated with integrating IKS into the contemporary education system under NEP-2020. The study adopts a descriptive and analytical approach based on secondary sources, including policy documents, academic literature, and government reports. The findings reveal that integrating IKS can promote experiential learning, cultural awareness, ethical values, and interdisciplinary thinking, thereby contributing to holistic student development. However, the implementation faces several challenges, such as lack of trained educators, curriculum restructuring, assessment alignment, and the risk of symbolic or superficial inclusion of traditional knowledge. The paper argues that addressing these challenges requires teacher training, scholarly validation of knowledge systems, and a balanced integration with modern pedagogical practices. Effective implementation of IKS under NEP-2020 has the potential to enrich Indian education by blending traditional wisdom with contemporary knowledge, fostering innovation, inclusivity, and global relevance.

Keywords: *IKS, NEP- 2020, Opportunities and Challenges.*

1.1 Introduction:

In the current era, education transcends mere information dissemination; it plays a crucial role in molding students' social ethics, moral values, and artistic awareness. The ancient civilization of India, along with its enduring knowledge traditions, has been a source of wisdom for millennia, encompassing various fields such as scripture, medicine, mathematics, philosophy, environmental consciousness, and holistic life perspectives. A key component of the National Education Policy (NEP) 2020 is the incorporation of the Indian Knowledge System (IKS) into formal education. This initiative aims to integrate knowledge from the Vedas, Upanishads, Ayurveda, Yoga, and other indigenous practices into contemporary curricula. The objective is

not only to preserve traditional knowledge but also to promote the holistic development of students, enhance creativity, and strengthen problem-solving skills, thereby cultivating thoughtful, responsible, and self-aware citizens.

However, the integration of IKS with modern education encounters numerous challenges, including a lack of appropriate curricula, a shortage of trained educators, and limited research resources. The purpose of this study is to examine the practical implementation and the associated challenges of integrating the Indian Knowledge System into education under NEP 2020.

1.2 Review of the Literature Review:

Recent scholarly conversations following the preface of the National Education Policy (NEP) 2020 indicate a paradigm shift in the understanding of education in India (Government of India, 2020). Education is decreasingly perceived not simply as a medium for the transmission of subject-specific knowledge, but as a holistic process aimed at nurturing ethical values, artistic knowledge, and responsible citizenship among learners (Kumar, 2021).

A growing body of literature identifies the Indian Knowledge System (IKS) as a comprehensive depository of India's philosophical, scientific, and artistic traditions (Sharma, 2020). Before studies note that despite its depth and applicability, IKS had remained largely barred from formal educational fabrics due to the dominance of western- acquainted curricular models (Rao, 2019). NEP 2020 is extensively honoured as a corner policy that formally acknowledges indigenous knowledge and provides an institutional frame for its addition in mainstream education (Government of India, 2020).

Several experimenters argue that the integration of IKS enhances learners' critical thinking, creativity, and holistic development by linking education with artistic surrounds and existential literacy (Mishra, 2021). Studies further suggest that traditional knowledge systems promote interdisciplinary literacy and problem-working capacities, aligning with the faculty- grounded educational approach supported by NEP 2020 (Singh, 2022).

The flexible curricular frame proposed under NEP 2020 has been examined by scholars as a probative medium for incorporating IKS across different situations of education (NCERT, 2022). Emphasis on mama - lingo instruction, value- grounded education, and contextual literacy is considered conceptually harmonious with the foundational principles of the Indian Knowledge System (UNESCO, 2021).

At the same time, empirical studies punctuate several challenges in the effective integration of IKS into formal education. Experimenters point out that shy schoolteacher training, limited pedagogical coffers, and the absence of structured perpetration strategies may circumscribe the practical consummation of policy pretensions (Das, 2021).

Some scholars also advise that without academic rigor and inclusivity, the integration of IKS may lead to picky representation of knowledge traditions (Banerjee, 2022). Hence, methodical class design and nonstop evaluation are considered essential for icing balanced and meaningful addition.

Recent research in the field of educational philosophy suggests that Indian Knowledge Systems prioritize learning as a process grounded in real-world experiences and active participation, rather than simply the gathering of information. This viewpoint aligns closely with contemporary constructivist learning approaches (Iyer, 2020).

Scholars emphasize that moral reasoning, ethical principles, and social responsibility are fundamental to Indian Knowledge traditions, rendering IKS particularly aligned with the value-driven educational framework advocated by the National Education Policy 2020 (Mehta, 2021).

Examinations of traditional educational methodologies indicate that interactive and dialogic techniques, such as the guru–shishya model, embody principles akin to modern learner-centered and reflective teaching strategies (Joshi, 2019).

Research related to curriculum development indicates that integrating Indian Knowledge Systems into education bolsters students' cultural identity and fosters a greater sense of belonging within the educational setting (Mukherjee, 2020).

Empirical investigations reveal that the incorporation of local histories, folk wisdom, and indigenous practices into the curriculum significantly enhances student engagement and aids learners in connecting academic concepts to their social realities (Dutta, 2021).

Numerous academics contest the notion that Indian Knowledge Systems lack scientific credibility, asserting instead that these systems are fundamentally based on observation, rational inquiry, and experiential understanding (Sengupta, 2018).

Studies in health and environmental education underscore that traditional Indian practices, including yoga, Ayurveda, and ecological balance, can effectively complement and enrich contemporary scientific education (Tripathi, 2020).

Exploration in advanced education surrounds emphasizes the part of universities in promoting interdisciplinary exploration, attestation of indigenous practices, and invention embedded in IKS (Patel, 2020). Similar enterprise is viewed as pivotal for strengthening the academic legality of traditional knowledge within ultramodern education systems.

Relative studies further reveal that the integration of indigenous knowledge systems into formal education has produced positive educational issues in several global surrounds, buttressing the applicability of IKS within Indian education reforms (UNESCO, 2021).

The reviewed literature collectively establishes that NEP 2020 represents a significant paradigm shift in Indian education by advocating a holistic, value-oriented, and culturally grounded approach to learning (Government of India, 2020; Kumar, 2021). Scholars widely acknowledge the Indian Knowledge System (IKS) as a rich and multidimensional repository of philosophical, scientific, and artistic traditions with the potential to enhance educational relevance and learner engagement (Sharma, 2020; Mishra, 2021). This body of work effectively foregrounds the opportunities associated with integrating IKS, particularly in fostering interdisciplinary learning, ethical consciousness, creativity, and problem-solving abilities aligned with the competency-based framework of NEP 2020 (Singh, 2022). However, a critical examination reveals that much of the existing literature remains conceptual and normative in nature. While scholars strongly advocate the inclusion of IKS, there is a limited presence of empirical studies examining its actual classroom implementation, learning outcomes, or assessment mechanisms, especially at the school level. The literature frequently celebrates IKS as inherently beneficial but often lacks critical interrogation of how traditional knowledge can be pedagogically translated into modern curricula without oversimplification or loss of academic rigor. Several studies rightly identify structural and institutional challenges, such as inadequate teacher training, scarcity of instructional resources, and absence of clear implementation frameworks (Das, 2021). Nevertheless, these challenges are often discussed in isolation rather than within a comprehensive policy-execution model. There is insufficient exploration of systemic issues such as curriculum overload,

regional diversity of knowledge traditions, and alignment between IKS content and contemporary disciplinary standards. Concerns raised regarding selective representation and ideological appropriation of IKS (Banerjee, 2022) introduce an important critical dimension. Yet, the literature stops short of proposing concrete safeguards or evaluative criteria to ensure inclusivity, plurality, and scholarly validation. Similarly, while higher education institutions are recognized as key agents in legitimizing and innovating within IKS (Patel, 2020), there is limited discussion on institutional readiness, research infrastructure, and interdisciplinary collaboration required for sustainable integration. Comparative and global studies (UNESCO, 2021) strengthen the argument for integrating indigenous knowledge systems but are often generalized; offering limited contextual specificity for India's complex socio-cultural and educational landscape. This indicates a gap between global policy advocacy and localized implementation realities.

1.3 Objects of the Study:

1. To study the major challenges and opportunities involved in integrating the Indian Knowledge System (IKS) into the education system.

1.4 Methodology:

This research has been carried out utilizing a descriptive and qualitative exploration methodology. The required data for this exploration were gathered from secondary sources, such as vibrant exploration papers, scholarly journals, books, and relevant policy documents. The information obtained was analyzed and examined through a comparative and logical framework to effectively convey the subject matter of the study.

1.5 Findings and Discussion:

The Indian Knowledge System refers to a vast, historically rooted body of indigenous knowledge encompassing philosophy, sciences, arts, ecology, medicine, ethics, language, and pedagogy developed over millennia in the Indian subcontinent (Dharampal, 2000; Radhakrishnan, 1951). Unlike compartmentalized Western epistemologies, IKS is holistic and contextual, often integrating cultural and spiritual dimensions of learning (Radhakrishnan, 1951; Sen, 2005). IKS is not merely traditional knowledge; it represents distinct epistemological frameworks for reasoning and problem-solving, evident in areas such as Vedic mathematics, Ayurveda, indigenous ecological management, and ethical philosophy (Raju, 2007; Sharma, 2013; Gadgil & Guha, 1995). The National Education Policy 2020 explicitly advocates the inclusion of indigenous knowledge systems to promote multidisciplinary, culturally rooted, ethical, and experiential education (Government of India, 2020). However, translating this policy vision into practice requires complex structural and epistemic transformations, including rethinking curricular knowledge, pedagogy, and assessment practices (Kumar, 2005; Apple, 2004; Shulman, 1987).

Major Challenges in Integrating IKS into Education:

A. Curriculum Design and Standardization:

- Lack of a standardised framework: IKS knowledge is deeply contextual, often region-specific, and characterised by oral traditions or texts in classical languages (e.g., Sanskrit), making uniform curricular incorporation difficult (Rao & Paranjape, 2016).
- Syllabus overload: Balancing existing mandated curricula with additional IKS content without overwhelming students remains a key concern. Some research indicates that nearly half of institutions report difficulties harmonizing IKS with modern syllabi. Without thoughtful curriculum

sequencing and clear alignment with learning outcomes, IKS content risks being treated as decoration rather than core pedagogy Puri, J., 2025).

B. Pedagogy and Teacher Preparedness:

- Teacher training gap: Most educators are trained in modern, exam-oriented pedagogy and lack exposure to IKS content and teaching strategies (Tripathy, & Mishra, 2025).
- Experiential and contextual method — crucial to IKS — are not widely practiced in schools and colleges, which emphasise textbook-based instruction (Puri, 2025). Deep integration requires systemic professional development, not optional workshops. Pedagogical redesign must prioritise culturally responsive, participatory, and experiential methods.

C. Assessment and Accreditation Issues:

- Lack of robust assessment models: Standard testing metrics (MCQs, written exams) are poorly suited to evaluating value-based, process-oriented, and contextual forms of IKS learning (Tripathy, & Mishra, 2025). Educational assessment reform — incorporating portfolios, project-based evaluations, peer feedback, and reflective logging — is essential for validating IKS learning outcomes.

D. Institutional Resistance and Academic Perception:

- Resistance from conventional academia: There is documented scepticism among some academic communities, who see IKS as lacking in "rigour" or "scientific value" (Malik, 2024). Addressing perception gaps will require rigorous scholarship that bridges indigenous epistemologies with contemporary scientific frameworks — establishing credibility without reducing IKS to mere folklore.

E. Resource Constraints and Documentation:

- Limited resources: Many IKS domains lack adequate textbooks, translated materials, digital archives, or trained researchers (Mukherjee, 2025).
- Risk of misinterpretation: Without careful documentation, oral traditions risk distortion or superficial representation when converted into classroom content (Tripathy, & Mishra, 2025).

Key Opportunities in Integrating Indian Knowledge Systems:

- Promoting Holistic and Value-Based Education Indian Knowledge Systems integrate ethical, ecological, and philosophical dimensions that foster holistic student development — addressing social, emotional, and cognitive domains simultaneously.
- Enhancing Cultural Identity and Diversity Awareness Integration supports cultural continuity, binding students to their intellectual heritage, and counteracting the colonial legacies that marginalised indigenous knowledge. This is especially impactful for students whose identities and communities are tied to subaltern or oral traditions often absent from mainstream curricula.
- Fostering Interdisciplinary Linkages IKS inherently cuts across disciplines — philosophy, ecology, mathematics, medicine — making it a natural vehicle for interdisciplinary education that aligns with NEP 2020's goals and global 21st-century learning trends.

- Supporting Sustainable and Localised Learning Models IKS's -IKS's emphasis on ecological balance, local environmental practices, and sustainable living offers pedagogical models relevant to climate education and sustainable development goals (SDGs) (Gadgil, Berkes, & Folke, 1993).
- Innovation and Research Expansion -New institutional initiatives (e.g., IKS centres at universities) aim to foster research, digital documentation, entrepreneurship, and interdisciplinary collaboration — cultivating a knowledge ecosystem where traditional insights inform modern innovation.

Strategic Pathways for Effective Integration:

To transcend rhetoric and implement meaningful IKS inclusion:

- Curriculum Co-Design: Collaborative development with educators, community knowledge holders, and scholars to develop frameworks that align with learning outcomes.
- Teacher Education Reform: Embed IKS concepts in teacher training institutions and continuous professional development.
- Assessment Innovation: Develop assessment tools that capture student growth in reasoning, ethics, and contextual understanding.
- Documentation and Translation Projects: Invest in translating primary classical and regional language texts to broader pedagogical usage.
- Evidence-Based Research: Encourage empirical studies on learning outcomes, student engagement, and comparative pedagogy.

Integrating the Indian Knowledge System into contemporary education presents a transformative opportunity to enrich India's educational landscape with cultural depth, holistic learning, and interdisciplinary relevance. However, the task is far from straightforward. It requires addressing fundamental challenges in curriculum, pedagogy, assessment, institutional support, and academic legitimacy. A critical, well-resourced, and pedagogically grounded approach — one that resists superficial inclusion and embraces deep epistemic engagement — will determine whether IKS integration remains a policy ideal or becomes a sustained educational reality.

1.6 Conclusion:

The conclusion of this study suggests that incorporating the Indian Knowledge System into the contemporary education framework is of great importance in today's educational landscape. Nevertheless, various challenges have arisen in practice. The findings indicate that the current curriculum is predominantly focused on examinations and specific subjects, which complicates the effective integration of traditional knowledge. Furthermore, in numerous instances, educators do not receive sufficient training or clear direction regarding the Indian Knowledge System, hindering their ability to effectively convey these concepts in the classroom. Consequently, these factors have been recognized as significant obstacles in the integration process.

Conversely, the study illustrates that creating a successful link between ancient Indian knowledge and modern education can render the education system more applicable and meaningful. Aspects of the Indian Knowledge System, including values, environmental consciousness, moral education, and experiential learning, contribute to the comprehensive development of students, which cannot be accomplished solely

through modern educational methods. Therefore, merging Indian knowledge with contemporary education can assist students in cultivating cultural awareness while also improving their capacity to navigate the current global environment.

In conclusion, the study emphasizes that reforming the curriculum, enhancing teacher training, and ensuring robust policy support are crucial for the effective integration of ancient Indian knowledge with the existing education system. Merely engaging in theoretical discussions is inadequate; instead, the goals outlined in the National Education Policy 2020 can only be realized through the practical application of this knowledge within the educational framework.

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