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## Indian Knowledge System And NEP 2020:

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### Abstract

The Indian Knowledge System (IKS) is a comprehensive framework of thought, experience, and practice which represents a rich civilizational legacy, encompassing ancient scientific traditions, philosophical thought, linguistic heritage, traditional medicine, environmental and pedagogical approaches. It is a holistic system that emphasizes experiential learning, spiritual growth, and the pursuit of knowledge in harmony with nature and society. Modern initiatives, like the Ministry of Education's IKS Division, aim to preserve, promote, and integrate IKS into contemporary society and education. The National Education Policy (NEP) 2020 recognizes the critical role of IKS in shaping a holistic, value-based, and multidisciplinary education system. The policy emphasizes the promotion and preservation of India's diverse knowledge systems, including traditional practices in areas like Ayurveda, yoga, and sciences, and encouraging the use of modern technology to rejuvenate them. The government is establishing IKS centers in institutions and supporting research through programs like the IKS Internship Program to develop authentic and comprehensive material for textbooks and other educational resources. This paper examines the conceptual foundations of IKS, evaluates the policy provisions introduced under NEP 2020 to integrate IKS into modern education, and analyzes challenges and opportunities for implementation. Using a qualitative analysis of secondary data from government documents, academic literature, and institutional reports, the study finds that NEP 2020 provides a powerful framework to mainstream IKS through curriculum reform and institutional strengthening.

Keywords: Indian knowledge systems, NEP2020, Indigenous knowledge, Education Reforms, Curriculum of Indian education system.

### Introduction :

**The Indian Knowledge System (IKS)** refers to the collective body of knowledge, beliefs, and practices that originated and evolved various fields of education in the Indian education system. It is based on ancient traditions and scriptures like the Vedas, but also includes indigenous and tribal knowledge. Currently, IKS is being promoted through interdisciplinary research and integration into education to provide practical solutions for contemporary problems. The Indian Knowledge System (IKS) represents a vast and diverse intellectual tradition that has evolved over thousands of years, encompassing philosophy, sciences, mathematics, medicine, arts, linguistics, ecology, and ethical worldviews. Rooted in ancient texts such as the Vedas, Upanishads, Puranas, Buddhist and Jain literature, as well as regional intellectual traditions, IKS reflects India's civilizational approach to holistic development of learning.

Indian made the remarkable progress in women education during Vedic period. Maitreyi, Viswambhara, Apala, Gargi, and Lopamudra were prominent women Vedic scholars, known for their contributions to philosophy, religion, and Vedic knowledge, with Maitreyi and Gargi being particularly renowned for their philosophical discussions and questioning of the established Vedic traditions. They were born in India and made invaluable contributions to the enrichment of the Indian knowledge tradition.

Ancient centers of learning such as Takshashila, Nalanda, and Vikramashila, along with various forms of the gurukul tradition, played an important role in shaping India's intellectual landscape by fostering debate, research, and experiential learning.

Contributions such as Ayurveda, Yoga, Panini's grammar, Aryabhata's mathematics and astronomy, and architectural sciences demonstrate the scientific depth of IKS.

**The National Education Policy (NEP) 2020** The National Education Policy (2020) proposes several measures to reintegrate children who are outside the formal school system, including expanding flexible learning pathways such as open schooling. It also places strong emphasis on improving the early foundations of literacy and numeracy. "A major structural reform in the policy is the reorganization of schooling into four developmental stages using a 5-3-3-4 model, broadly corresponding to the age groups 3–8, 8–11, 11–14, and 14–18. This divides school education into four stages: (NEP2020)

Foundational Stage: This stage lasts for 5 years and includes children between the ages of 3 and 8.

Preparatory Stage: This stage covers 3 years of schooling for children aged 8 to 11.

Middle Stage: This stage spans 3 years for students aged 11 to 14.

Secondary Stage: This stage extends over 4 years for learners between 14 and 18 years of age."

"Important changes under this policy include an increased emphasis on vocational education, the creation of the National Assessment Centre—PARAKH, and the adoption of interdisciplinary learning across subjects. PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development) is an autonomous body under NCERT formed to develop standards, guidelines, and frameworks for student assessment as directed by NEP 2020". The long-term benefits and drawbacks of this policy will become clearer in the coming years

NEP 2020 has been implemented in most parts of the country, with some states still in the process of adoption. It aspires to provide equitable and high-quality education to every student, regardless of social or economic background. As the first major education policy of the 21st century, it seeks to fulfill India's developmental aspirations, uphold cultural and traditional values, address pedagogical gaps, reduce structural disparities, increase accessibility, and prepare students for the evolving needs of modern India.

In this context, examining the relationship between Indian knowledge system and National policy on education 2020 becomes essential for understanding how the difference aims of India to develop an education system that is globally competitive yet culturally relevant. This research paper explores the conceptual foundations of the Indian Knowledge System, analyses the ways in which NEP 2020 incorporates IKS principles, and evaluates the potential implications for pedagogy, research, and national development.

## Literature review

Banga (2010) analyses the key national advances in higher education for sustainable development in India and highlighted the varied educational strategies that are emerging in relation with education for sustainable development.

(Balasubramaniam,2019) IKS encompasses a holistic worldview integrating scientific inquiry, philosophical reasoning, ethics, arts, and environmental knowledge .

(Menon,2020) Indian contributions—such as Panini’s grammar, Aryabhata’s astronomy, Charaka’s medical system—illustrate the historical depth and sophistication of these knowledge traditions .

(Rao 2019) Scholar describes the IKS as a holistic interdisciplinary framework that includes the scientific, philosophical, artistic dimension rooted in Indian civilization. The system emphasizes on the harmony between knowledge , human life and nature stressing values such as sustainability, interdependence and spiritual inquiry.

NEP 2020 aligns with these perspectives by encouraging experiential learning mother - tongue instruction, and interdisciplinary curricula that acknowledge India's cultural and intellectual diversity.

(Varghese.2020) In the Indian context, it highlights how indigenous agricultural practices, water-management systems, and craft traditions can contribute to both experiential learning and sustainable development

(Jagadesh,2020) emphasized that NEP-2020 is timely and futuristic approach, which will lead in promoting critical thinking, competency and making learning experiential. It will lead to prepare the students to actively contribute to the economic progress of the country.

Patil (2021) believes that the new National Education Policy 2020 will result in promoting Indian value-based education, Bharat-centric education, development of knowledge-based society, and emphasis on knowledge-based education.

(Sharma,2021) Despite growing interest, empirical studies on IKS implementation remain limited. Challenges include minimal teacher preparedness, lack of curricular models, and insufficient documentation .

## Methodology

This is a qualitative study based on secondary sources of information. The current study is grounded on reviews of the related literature, for which information was gathered from variety of journals, magazines, and websites and published articles that deal with the subject matter.

(a) Data Collection: Identifying a comprehensive and diverse set of research papers, and expert opinions akin to the Indian and Knowledge system and National Policy 2020 and its implementation

(b) Data Selection: Reviewing the collected articles which are recently published and relevant to that research topic

c) Thematic Analysis: Reading through the selected articles to gain a comprehensive understanding of the challenges highlighted and using coding system to label and categorize challenges based on themes that appear from the articles.

No primary data was collected , Data reliability Ensured through cross verification of multiple academic and government sources.

### **Integration of Indian knowledge systems with India's National Education Policy (NEP) 2020 -**

The policy acknowledges India's rich intellectual and cultural heritage and aims to bring this knowledge into the mainstream educational structure.

IKS is connected to NEP-2020 through:

#### **1.Promotion and Preservation:**

NEP-2020 highlights the need to promote and preserve India's traditional knowledge, including languages, arts, sciences, and age-old practices. It recognizes that India's heritage includes fields like Ayurveda, Yoga, the Vedas, Jyotish, and many other indigenous sciences.

#### **2.Interdisciplinary Learning:**

The policy encourages courses that combine traditional knowledge with modern academic disciplines. Universities are motivated to design programs that link ancient wisdom with current fields, promoting a well-rounded educational approach.

#### **3 Research and Documentation:**

NEP-2020 supports extensive research and documentation of Indian knowledge. It proposes creating dedicated research centers and institutions to study and record traditional knowledge. This will help preserve, deepen, and spread IKS among researchers, experts, and the public.

#### **4.Language Preservation:**

The policy stresses the importance of Indian languages as carriers of traditional knowledge. It promotes multilingual education so that students can read and understand classical texts and indigenous knowledge in their original languages.

#### **5.Curriculum Integration:**

The policy recommends including Indian Knowledge Systems in both school and higher education curricula. It suggests blending IKS with subjects like science, mathematics, social sciences, and languages so that students can understand these subjects along with their cultural and historical backgrounds.

#### **6.Cultural Sensitivity and Diversity:**

NEP-2020 values cultural diversity and encourages respect for India's varied traditions. It calls for the acknowledgment and celebration of India's multicultural heritage, helping learners appreciate different knowledge systems.

### **7.Environmental Knowledge from IKS:**

Traditional ecological knowledge, including sustainable farming, water conservation, and biodiversity practices, is encouraged within environmental education. This helps students learn indigenous solutions to modern environmental challenges.

### **8.Local Knowledge and Community Involvement:**

The policy promotes learning from local communities, artisans, farmers, and practitioners of traditional skills. Such community-based learning bridges the gap between formal education and local wisdom.

### **9.Digital Documentation of IKS:**

The policy calls for digitizing ancient manuscripts, cultural records, and traditional knowledge repositories. This ensures the preservation and accessibility of IKS for future generations.

### **10.Vocational Education Linked to Traditional Skills:**

NEP encourages including traditional crafts, weaving, pottery, and local technologies in vocational courses. This helps preserve indigenous professions and supports skill-based learning.

## **Challenges in Implementing the Indian Knowledge System (IKS) with NEP 2020:**

Even though Indian Knowledge Systems have great historical value and potential benefits, bringing them into the education system faces several difficulties. The major challenges include:

### **1. Lack of Institutional Support:**

Many educational institutions and regulatory bodies do not give enough importance to including IKS in their curriculum or policies. There is often a shortage of proper funding, infrastructure, and trained experts needed to successfully carry out IKS-related programs.

### **2.Perception and Acceptance Issues:**

Traditional knowledge is sometimes viewed as outdated or not suitable for modern needs. Biases against indigenous systems may cause them to be ignored or undervalued in mainstream education and research.

### **3. Standardization and Scientific Validation:**

Traditional knowledge is not always organized or tested according to modern scientific methods. To integrate IKS with current scientific practices, proper frameworks must be developed to verify and validate this knowledge, ensuring it is accurate, safe, and effective.

### **4. Language Barriers:**

A large portion of India's traditional knowledge is preserved in ancient texts written in Sanskrit, Tamil, and other classical languages. Because many people cannot read these languages, access to these texts becomes difficult, limiting the spread and understanding of IKS.

### **5. Decline of Indigenous Knowledge:**

Due to rapid urbanization, globalization, and cultural shifts, many traditional practices are disappearing. Younger generations may show less interest in these traditions, resulting in a break in the transmission of knowledge from elders to youth.

**6. Curriculum Gaps:** There is no well-defined or organized curriculum for IKS, which creates confusion for teachers. Most available resources are also written in old or classical languages, making them difficult to use.

**7. Resource Constraints:** There is limited financial support, a shortage of research institutions, and inadequate infrastructure to promote education centered on Indian Knowledge Systems.

### **8. Limited Awareness and Understanding**

Many teachers, students, and even policymakers are not fully aware of what IKS includes or how it can be applied in modern education. This lack of understanding slows down its implementation.

## **Major Suggestions for Effective Implementation of NEP 2020 and IKS**

### **1. Develop a Well-Structured IKS Curriculum:**

Create clear, age-appropriate, and standardized IKS curricula for all levels of education. This will help teachers know what and how to teach.

### **2. Teacher Training and Capacity Building:**

Conduct regular training programs to equip teachers with knowledge of Indian traditions, culture, and IKS-related subjects. Skilled teachers are essential for effective implementation.

### **3. Strengthen Research and Documentation:**

Establish dedicated research centers for studying, preserving, translating, and modernizing traditional knowledge. Encourage universities to undertake research projects on IKS.

**4. Increase Funding and Infrastructure:** Provide adequate financial support, technological tools, libraries, and laboratories to institutions implementing IKS. Proper resources will ensure quality education.

### **5. Promote Interdisciplinary Learning:**

Encourage combining IKS with modern science, mathematics, technology, and social sciences to create holistic and relevant learning experiences.

**6. Include Local Knowledge and Community Participation:** Involve local scholars, artisans, practitioners, and community elders in teaching and sharing indigenous knowledge with students.

**7. Use Technology and Digital Platforms:** Create online courses, digital libraries, and interactive modules on Indian Knowledge Systems to make learning easier and more engaging.

### **Conclusion:**

The integration of Indigenous Knowledge Systems (IKS) in India seeks to strengthen people's understanding of the environment and cultural heritage. Since IKS is rooted in traditional, experience-based knowledge, it can guide learners in addressing practical challenges like food security and climate change in their everyday lives. Yet, several difficulties still hinder its effective incorporation into the education system, and these must be resolved for meaningful implementation. Aligned with the National Education Policy (NEP) 2020, the Indian government is taking steps to embed IKS into school and higher-education curricula. For this to be successful, teachers require proper training so they can comprehend and teach IKS in a relevant way. Additionally, existing

IKS resources need to be systematically collected, organized, and made accessible through digital platforms to suit the needs and capacities of various stakeholders. As IKS has evolved over thousands of years, its integration into modern education will naturally be a slow and continuous process

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