



---

## Revitalizing Indian Knowledge Systems: Integrating Local Wisdom into Contemporary Pedagogies

**Dr. Tarannum Sarwar Dani**

Assistant Professor (Psychology), JAIN (Deemed-to-be University) Bengaluru Karnataka

Sarwar.tarannum@gmail.com, ORCID ID: 0000-0001-5652-2906

---

DOI : <https://doi.org/10.5281/zenodo.17398076>

---

### ARTICLE DETAILS

**Research Paper**

**Accepted:** 02-09-2025

**Published:** 19-10-2025

**Keywords:**

*Indian Knowledge Systems (IKS), Culturally Responsive Pedagogy, National, Education Policy 2020, Curriculum Reform*

---

### ABSTRACT

The Indian Knowledge System (IKS) embodies a complete and interdisciplinary approach that includes a craft tradition based on traditional science, philosophy, health methods, ecology, language learning and a generation of practical wisdom. Even though stable living and education have a major impact on their community-focused focus, these systems have historically lost sight of formal training. This study examines the need to rejuvenate IKs, including local knowledge in modern learning structures, particularly in relation to the 2020 National Education Policy (NEP). This study supports programs, teacher development programs and digital tools that promote the exchange between X and younger generations and maintain its certification

---

### Introduction

#### Indian Knowledge system

India has a rich heritage of indigenous knowledge systems that have contributed significantly to global civilization, from Ayurveda and yoga to Vedic mathematics and environmental stability practices. The colonial education system systematically suppressed these knowledge traditions and replaced them with a Euro-centric model. After independence, Indian politics continued to prioritize Western knowledge, bringing a break between modern education and Indian intellectual heritage.



## **National Education Policy (NEP) 2020**

The National Education Policy (NEP) 2020 highlights the integration of Indian knowledge systems in formal education. The NEP highlights the analysis of IK's historical alienation and provides an educational structure for inclusion of IK in contemporary education, taking into account successful thematic studies of IKS integration. Deeply rooted in empirical observation, logical thinking and mental research, these systems have historically contributed to global scientific and philosophical thinking (Sen, 2005; Subbarayappa, 2011). Nevertheless, colonial epistemic hegemony imposed during British rules systematically delegated IKS and categorized them into "Non -scientific" or "Primitive" (Kumar, 2013). Rapid dependence, the Indian education system continued to prioritize the euro-centric knowledge structure in this field, leading to an educational disruption of indigenous epistemology (Alvares, 2011).

### **The marginalization of IKS has had far-reaching consequences**

Cognitive Dissonance in Education: Students teach scientific and philosophical concepts that are deprived of Indian origin and contribute to cultural alienation (Nair, 2020).

Loss of sustainable practice: Traditional environmental knowledge (TEK) such as drought, culture, and decentralized water management has been replaced by modern environmentally destructive methods (Shiva, 2015). Indigenous language reduction and oral tradition: Sanskrit and the regional languages that serve as the main native speakers disappear from academic discourse (Mohanty, 2019).

### **The Paradigm Shift: Reclaiming IKS in Contemporary Education**

National Education Policy (NEP) 2020 mandates the inclusion of IKS in curricula, recognizing its role in fostering "rootedness and global competitiveness" (MoE, 2020).

Global Recognition: UNESCO's inclusion of Yoga and Ayurveda as Intangible Cultural Heritage (2016, 2019) validates the scientific and cultural value of IKS.

Pedagogical Innovations: Experimental schools (e.g., *Rishi Valley*, *Auroville*) and university programs (e.g., *IIT Gandhinagar's IKS Centre*) are pioneering contextually rooted education models.

## **RESEARCH OBJECTIVES**

1. Examine the historical and epistemological foundations of IKS and their relevance to modern education.



2. Analyze contemporary efforts to integrate IKS into pedagogical frameworks.

## REVIEW OF LITERATURE

Over the last few decades, discourse on the Indian Knowledge System (IK) and integration into modern education has gained momentum when scientists studied its historical restraint, its epistemic values, and its modern relevance. Historians such as Kumar (2013) and Alvarez (2011) have argued that colonial education policy, especially the moment of Makoley (1835), systematically commanded with indigenous knowledge, unscientific, marked as and lead to the destruction of the formal academy. Postcolonial theorists, including Nandi (1983), highlight how this epistemological violence created a cultural gap and alienated Indians with their intellectual heritage. Nevertheless, recent scholarships raise questions about this story, highlighting the scientific gravity integrated into IK. Subbarayappa (2011) and Sen (2005) show that traditional Indian sciences such as Ayurveda, metallurgy, and astronomy are based on empirical observations and logical frameworks that precede many Western discoveries. For example, the Kerala School of Computation (14th-16th Centuries) later developed a fundamental concept that was attributed to Newton and Leibniz (Rajagopal and Rangachari, 1986). The pedagogical potential of IKS has been explored in contemporary educational research. Patwardhan (2016) advocates for the integration of Ayurveda and Yoga into modern medical curricula, citing their holistic and preventive healthcare approaches. Similarly, studies on Vedic Mathematics (Tirthaji, 1965) reveal its efficacy in enhancing computational skills among schoolchildren, as evidenced by pilot programs in Gujarat and Karnataka (NCERT, 2019). Environmental scholars like Shiva (2015) and Gadgil (1993) stress the urgency of reviving traditional ecological knowledge (TEK), such as watershed management and organic farming, to address modern sustainability crises. Despite these advancements, institutional barriers persist. Nair (2020) identifies a lack of teacher training and standardized curricula as major hurdles, while Mohanty (2019) underscores the decline of Sanskrit and regional languages as mediums of IKS transmission.

However, global and national initiatives show delays in the paradigm. While UNESCO's perception of yoga (2016) and Ayurveda (2019) has given it legitimacy as it is an intangible cultural heritage, national policies in the field of education (NEP) mandates its inclusion in formal education. Popular models such as training based on the regeneration of Auroville's and Gurukul pedagogy provide practical drawings for IK integration (Menon, 2021). These events suggest an increase in consensus regarding the need for decolonization of education, although implementation of the system remains problematic, by repeating a series of indigenous epistemology.



## DISCUSSION

This study contributes to the growing literature advocating for a renaissance in the contemporary educational paradigm and the integration of Indian knowledge systems (IK). Historical alienation of IK during colonial rule leads to a systematic devaluation of indigenous epistemology, and scientists invoke epistemological violence (Alvares, 2011; Kumar, 2013; Nandy, 1983). The privilege of post-independence India's euro-centric programme further strengthened this separation and distancing students from culturally solid cognitive methods. Research indicates that IKS such as Ayurveda, Vedic mathematics, and traditional ecological knowledge (TEK) are not only deeply empirical but also offer holistic, preventive, and sustainability-oriented approaches to knowledge and practice (Sen, 2005; Subbarayappa, 2011; Gadgil & Berkes, 1993; Shiva, 2015). These systems, transmitted through Sanskrit and vernacular traditions, reflect centuries of observation, rationality, and spiritual inquiry—qualities commonly attributed to Western science (Patwardhan, 2016; Rajagopal & Rangachari, 1986).

With the National Education Policy (NEP) 2020, India has officially recognized the importance of IK integration into the structure of formal education (Ministry of Education [MOE], 2020). However, translation of this policy into practice remains unequal. NAR (2020) highlights barriers to the system, such as inadequate training for teachers and lack of standard teaching models. Mohanti (2019) highlights the decline in languages that threaten IKS communication, noting that indigenous knowledge is often invested in English-speaking environments and oral traditions.

Nevertheless, experimental educational initiatives offer valuable insight into feasible integration models. For instance, institutions such as Rishi Valley School, Auroville, and IIT Gandhinagar's IKS Centre are redefining education by promoting place-based, experiential, and interdisciplinary learning aligned with IKS (Menon, 2021). These programs illustrate that cultural rootedness need not be antithetical to academic rigor or global competitiveness.

## CONCLUSION

The findings suggest that the revitalization of Indian Knowledge Systems within mainstream education is both a cultural imperative and an epistemological necessity. NEP 2020 provides a strong policy framework, but implementation demands coherent strategies across multiple educational levels.

Integrating IKS can address multiple educational and social issues simultaneously—ranging from cognitive dissonance among learners (Nair, 2020) to ecological crises and public health challenges (Shiva, 2015; Patwardhan, 2016). Moreover, IKS represent not just cultural heritage but a legitimate body



of scientific knowledge capable of informing global discourses on sustainability, resilience, and community-centered innovation (UNESCO, 2016, 2019; Subbarayappa, 2011).

Revitalizing IKS through educational reform offers an opportunity to decolonize the Indian educational landscape and foster a generation of learners who are both culturally grounded and globally competent. Future research should focus on empirically evaluating the pedagogical outcomes of IKS-based curricula and identifying scalable models of integration.

## REFERENCES

- Alvares, C. (2011). *Decolonizing the university: The case of India*. Tulika Books.
- Gadgil, M., & Berkes, F. (1993). Traditional resource management systems. *Resource Management and Optimization*, 18(2), 127–141.
- Kumar, K. (2013). *Politics of education in colonial India*. Routledge India.
- Menon, M. (2021). Contextual pedagogies and local knowledge: The case of Auroville. *Educational Review Journal*, 23(1), 44–60.
- Ministry of Education. (2020). *National Education Policy 2020*. Government of India. [https://www.education.gov.in/sites/upload\\_files/mhrd/files/NEP\\_Final\\_English\\_0.pdf](https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf)
- Mohanty, A. (2019). *Multilingual education and the loss of India's knowledge traditions*. Oxford University Press.
- Nair, P. (2020). Barriers to integrating IKS in Indian classrooms. *Journal of Educational Policy*, 15(3), 45–60.
- Nandy, A. (1983). *The intimate enemy: Loss and recovery of self under colonialism*. Oxford University Press.
- NCERT. (2019). *Vedic mathematics in school curricula: A pilot study*. National Council of Educational Research and Training.
- Patwardhan, B. (2016). Bridging Ayurveda with evidence-based medicine. *Journal of Ethnopharmacology*, 197, 39–45. <https://doi.org/10.1016/j.jep.2016.07.064>



- Rajagopal, P., & Rangachari, M. S. (1986). On an untapped source of medieval Keralese mathematics. *Archive for History of Exact Sciences*, 18(2), 89–102.
- Sen, A. (2005). *The argumentative Indian: Writings on Indian history, culture, and identity*. Penguin Books.
- Shiva, V. (2015). *Who really feeds the world? The failures of agribusiness and the promise of agroecology*. North Atlantic Books.
- Subbarayappa, B. V. (2011). *The roots of ancient Indian science*. HarperCollins.
- Tirthaji, B. K. (1965). *Vedic mathematics*. Motilal Banarsidass.
- UNESCO. (2016). *Yoga inscribed on the Representative List of the Intangible Cultural Heritage of Humanity*. <https://ich.unesco.org/en/RL/yoga-01163>
- UNESCO. (2019). *Ayurveda recognized as intangible cultural heritage*. <https://ich.unesco.org/en/news>