

Integration of Indian Knowledge System in Teacher Education in India: Needs and Challenges

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Abstract

In ancient times, education was not only a means of acquiring knowledge but also considered the basis for an individual's intellectual, moral, spiritual, and social development. All these traditional knowledge sources, theories, experiences, and cultural values are collectively called Indian Knowledge Systems (IKS). At present, due to globalization, modern technology, and changing social needs, many changes are taking place in the education system. In such a situation, it has become extremely necessary to recall the Indian knowledge system and its inclusion at different levels of education. It is important to incorporate Indian knowledge systems, especially in teacher education, as teachers are the backbone of the education system and play a crucial role in students' intellectual and moral development. The National Education Policy 2020 of the Government of India has laid special emphasis on integrating the Indian knowledge system at different levels of education. The Indian knowledge system offers a holistic, multidimensional approach to education. In the Indian tradition, the purpose of education was not only intellectual development; physical, mental, emotional, and spiritual development also received equal importance. If these subjects are included in teacher education program, teachers may be better able to foster students' holistic development. Apart from this, the Indian knowledge system also gives importance to local and indigenous knowledge. Ultimately, integrating Indian knowledge systems into teacher education is an important step towards making the education system more holistic, value-based, and culturally rich. Through this, not only will the teaching ability and attitude of the teachers improve, but the students will also develop awareness, confidence, and a sense of social responsibility towards their cultural heritage, ensuring that the rich knowledge tradition of India reaches future generations robustly.

Keywords: Challenges, Indian Knowledge System, Integration, Needs, Teacher Education

I. Introduction

The National Education Policy (NEP) 2020 has presented a significant change in India's educational vision, with the Indian Knowledge System (IKS) being explicitly incorporated into the entire education system, especially teacher education. IKS refers to the scientific, logical, philosophical and cultural dimensions of India, which include not only traditional systems such as Nyaya, Samkhya and Ayurveda, but also local, indigenous and tribal knowledge traditions.

Inclusion of these knowledge systems in teacher education is not just symbolic, but it is a revolutionary initiative, deeply linked to epistemic justice, cultural responsibility and decolonization of knowledge. In this paper, the author analyses the rationale for the integration of IKS, its benefits, challenges faced, and strategies for sustainable and inclusive implementation. India's rich civilization heritage encompasses many indigenous knowledge systems including philosophy, science, art, medicine, architecture and education. These systems continued to evolve through centuries through institutions and oral traditions such as the Gurukul and Nalanda University. Colonial education policies marginalized traditional Indian knowledge and prioritized Western knowledge. The Indian knowledge system is an ancient and rich repository of knowledge, based on the Vedas, Upanishads and other texts, and helps in understanding the deeper dimensions of human life, nature and the universe.

The system contributes significantly to diverse fields such as science, mathematics, astronomy, medicine, philosophy, education, architecture, metallurgy, fine and performing arts and agriculture. It includes six philosophies, fourteen disciplines and sixty-four arts.

Indian knowledge system is made up of three words – Indian, knowledge and system.

- Indian means united India;
- Knowledge is the insight gained from experience and observation.
- The system is an organized structure.

NEP 2020 seeks to reverse this trend and promote national pride and global competitiveness by making IKS a core part of the curriculum.

2. Justification of Integration of IKS in Teacher Education

➤ Cognitive Justice and Decolonization of Knowledge

The colonial education system suppressed indigenous knowledge systems for a long time and made western knowledge the criterion of superiority. The integration of IKS is an attempt to address this disparity, allowing different knowledge sources to be recognized and respected. Teacher education can thus become a platform where convergence of traditional knowledge and modern teaching methods is possible.

➤ Culturally Responsible Pedagogy

IKS provides a teaching methodology that is deeply rooted in culture. Teachers proficient in local languages, folklore, traditional knowledge and crafts can create a more effective and contextual learning environment. This not only strengthens the learning process but also recognizes the cultural identity of the students.

3. Development of 21st century skills

IKS cannot be considered as mere conventional wisdom; it encourages critical thinking, problem solving, creativity and sustainable development. For example:

- ❖ Ayurveda emphasizes on holistic health
- ❖ Nyaya philosophy develops rationality and analytical ability
- ❖ Tribal ecological knowledge is helpful in dealing with climate change

4. Theoretical Foundations of the Indian Knowledge Tradition

This section analyzes the philosophical and conceptual foundations of the Indian Knowledge System (IKS).

➤ **Holistic Vision:**

- The Indian knowledge system establishes a balance between the material and the spiritual. Here, the aim of education is not merely to earn a livelihood but to achieve holistic human development and character building.

➤ **Philosophy of the Vedas and Upanishads:**

- Our ancient texts (Vedas, Upanishads, etc.) are replete with principles of natural science, medicine (Ayurveda), mathematics, and astronomy. Knowledge has always been regarded as 'universal' and 'continuous'.

➤ **Inquiry and Logic:**

- The Indian tradition is not merely dogmatic; rather, it fosters logical thinking through philosophical systems such as *Nyaya* (logic) and *Mimamsa* (analysis).

5. The proposed implementation framework

❖ **Phased Capacity Building**

The capacity should be developed gradually through teacher training, workshops, research programmes and collaboration with local knowledge holders.

❖ **Community engagement and co-creation take an active part in the local community, artisan and expert learning process.**

❖ **Development Of Open Educational Resources (OER)**

IKS based content should be prepared in simple language and made widely available through digital medium.

❖ **Integration into curriculum and practical training.**

IKS should be included in different parts of the curriculum - foundational, teaching method and practical training.

❖ **Research and Evaluation Mechanism**

The impact of IKS should be scientifically evaluated to ensure its quality.

6. Practical Integration in Teacher Education (B.Ed./M.Ed.)

The following practical strategies are required to incorporate the Indian knowledge tradition into teacher education:

- **Gurukul and Experiential Learning:** Integrating experience-based teaching (akin to the 'Gurukul system'), learning in close proximity to nature, and the ethical values of the *Guru-Shishya* (teacher-disciple) tradition into B.Ed./M.Ed. training.
- **Yoga, Meditation, and Value-based Education:** Prospective teachers should be trained in mindfulness, yoga, and Indian ethical values so that they can instill moral values in students.

- Indigenous Knowledge: Teachers should be taught how to integrate local art, culture, dialects, and traditional knowledge with modern science and social sciences.
- Promotes multidisciplinary education - It establishes relationships between different subjects.
- Strengthens cultural identity. Students take pride in their traditions.
- Promotes ethics and sustainability. In line with the Sustainable Development Goals
- Encourages innovation. Combination of ancient and modern knowledge leads to new solutions

7. The main approaches and measures

1. Holistic and multidisciplinary education

- i. The freedom to study between different subjects
- ii. Combining traditional knowledge with modern topics.

2. Inclusion of Indigenous Knowledge

- i. Study of local traditions, folklore and traditional medicine
- ii. Promoting research and documentation.

3. Promotion of Indian Languages

- i. Study of Indian Languages and Literature
- ii. Encouraging translation and interpretation.

4. Values and Moral Education

- i. Incorporating moral teachings from Vedas, Upanishads, etc.
- ii. Emphasis on character building.

5. Cultural and artistic heritage

- i. Promotion of art, craft, music and dance
- ii. Establishment of cultural studies centers.

6. Health and Well-being

- i. Incorporating Yoga, Meditation and Ayurveda
- ii. Traditional way of life.

7. Environment and Sustainable Development

- i. Use of traditional environmental knowledge.
- ii. Protection of biological diversity.

8. NEP 2020: an observation

The National Education Policy 2020 is the first education policy of the 21st century, which replaced the 1986 policy. It aims to develop a multidisciplinary, holistic and global education system based on Indian values.

Main features:

- Flexible curriculum and choice-based education
- Emphasis on the mother tongue

- Basic literacy and numeracy.

Establishment of National Educational Technology Forum (NETF)

- Establishment of Indian Institute of Translation and Interpreting (IITI)

According to the NEP, IKS is a multifaceted knowledge tradition encompassing scientific, philosophical, artistic, medical and environmental knowledge.

9. The advantages of the integration of IKS

- The cultural renaissance.
- Comprehensive education.
- Environmental sustainability.
- Innovation and entrepreneurship.
- Inclusiveness (especially respect for rural and tribal knowledge)
- Increase in employability.
- Promoting sustainable development
- Cultural identity and identity.
- Encourage innovation and creativity.

It promotes contextual learning through local knowledge and develops multidisciplinary thinking.

10. Implementation Challenges and Solutions

The following are the obstacles and their practical solutions regarding the implementation of this system within the education sector:

Challenges:

- Lack of standard study material: The primary issue is the absence of books that are authentic, research-based, and aligned with a modern curriculum. [1, 2]
- Inadequate teacher preparedness: Most teachers are currently accustomed only to the Western education system and lack technical knowledge of ancient Indian knowledge systems.
- Fear of Orthodoxy: There is often a risk of the romanticization of ancient knowledge or of ideological controversies. [1]

Solutions:

- Training Programs (FDPs): Special orientation and capacity-building programs should be organized for in-service teachers.

- Interdisciplinary Research: New research should be conducted by integrating modern sciences (such as nanotechnology and environmental science) with ancient Indian sciences (such as Vastu, metallurgy, and Ayurveda).
- Digitization: Ancient knowledge should be made accessible in a multilingual format through digital repositories and online portals.

11. Measures for effective implementation

- Interdisciplinary Teaching Methodology
- Use of Digital Technologies (AI, VR / AR)
- Collaborative Research
- Community Engagement
- Teacher Empowerment and Training
- Curriculum Reform and Resilient Framework
- Teacher Training and Capacity Development
- Development of digital resources and study materials
- Promotion of research and cooperation
- Policy support and financial assistance

11: Future Directions and Policy Implications

- ✓ Policy suggestions to make the Indian Knowledge System (IKS) globally relevant in the future: [1]
- ✓ Curriculum Revamp: Adhering to UGC and NCERT guidelines, IKS should be incorporated as a mandatory component within the core curriculum of B.Ed. and M.Ed. programs.
- ✓ Translation and Dissemination: Manuscripts and texts available in Sanskrit and other ancient languages should be translated into Hindi and other modern Indian languages.
- ✓ Participation of Local Communities: Educational institutions should involve local artists, craftspeople, and experts possessing traditional knowledge in the teaching process.
- ✓ Cultural Pride and Global Leadership: Successful implementation of this policy will enable Indian students to connect with their roots (cultural heritage) and allow the country to emerge as a "global knowledge superpower."

12. Conclusion

The integration of traditional Indian knowledge systems into higher education under the National Education Policy 2020 is an important and visionary step. It not only preserves India's cultural heritage but also enables students to become globally competitive. This approach can be helpful in building an inclusive, multidisciplinary and ethical education system. Although there are many challenges in its implementation, its potential benefits are extremely broad. It can help build an educated society that is culturally aware, ethically sound and committed to sustainable

development. Inclusion of Indian knowledge system in teacher education is both a moral imperative and an educational innovation. It not only corrects historical injustices, but also makes education more inclusive and culturally relevant. However, for its successful implementation it is necessary to overcome epistemological challenges, lack of resources and structural barriers. If implemented in a balanced, research-based and context-sensitive manner, IKS can make teacher education more inclusive, sustainable and culturally enriching.

13. References

1. Chatterjee, S. (2025). *Integrating Indian Knowledge Systems into Teacher Education in India: Need and Challenges*. International Journal of Trends in Emerging Research and Development.
2. Hoque, M. S. (2025). *Integrating the Indian Knowledge System into Modern Education*. Research Journal of Language and Literature Sciences.
3. Madhu, D. (2025). *Indian Knowledge System in Teacher Education Curriculum based on 21st Century Skills*. IJFMR.
4. Pradhan, N., Devi, D., & Haloi, D. (2025). *Reintegrating the Indian Knowledge System in Modern Education: A Curricular Shift under NEP 2020* IJFMR.
5. Kumar, M. J. (2024). *Forging Connections: Integrating Indian Knowledge Systems in Higher Education*. IETE Technical Review.
6. Kale, A. (2026). *Indian Knowledge Systems (IKS): Bridging Ancient Wisdom with Modern Education and Technology*. IJERT.
7. Mehta, T., & Singh, N. V. (2023). *An Exploration of the Indian Knowledge System: Roots, Significance, and Contemporary Relevance*. Bhartiya Knowledge Systems Journal.
8. IMPRI (2024). *Indian Knowledge Systems: Reviving Ancient Wisdom for Modern Challenges*.
9. Research Gate (2024). *Indian Knowledge System (IKS): Breaking Barriers to Education through Collective Intelligence*.