

Integrating Indian Knowledge Systems in Teacher Education: A Pathway to Holistic Development

Shaktijeet Nayak¹, Sandhyarani Dhupal²

¹Assistant Professor in Educational Studies, Dept. of Teacher Education, M.P.C. Autonomous College, Baripada, Mayurbhanj, Odisha

²Assistant professor in Educational Studies, Dept. of Teacher Education M.P.C Autonomous College, Baripada, Mayurbhanj, Odisha

ABSTRACT

The interpretation of the National Education Policy (NEP) 2020, combined with the direction provided by University Grants Commission (UGC) guidelines, represents a major step in reordering the educational landscape of India. NEP 2020 endorses a comprehensive, multidisciplinary approach which draws on ethos and tradition, gives due attention to context and the use of mother tongue as a medium for instruction. If India's profound intellectual tradition is woven into Teacher Education, then its product will be a learning experience that is both ore inclusive, more involving and more tuned to the rhythm of its own culture. The present paper examines how IKS integration can enhance teacher education through curriculum design, pedagogical practices, cultural competence, interdisciplinary teaching, research and innovation, and continuous professional development. By bridging traditional wisdom with modern educational practices, teacher education programs can enrich learning content, cultivate a deeper appreciation of India's heritage, and equip educators to address diverse student needs. In the end, this is consistent with the larger goal of NEP 2020, which is to create an inclusive and culturally diverse educational system. A revolutionary route toward the comprehensive development of modern education is the integration of Indian Knowledge Systems (IKS) into teacher education. Indian Knowledge Systems, which have their roots in the country's rich intellectual traditions, cover a wide range of fields, including philosophy, mathematics, astronomy, medicine, the arts, environmental ethics, and value-based education. The integrated development of body, mind, intellect, and spirit is emphasised in ancient works such as the Vedas, Upanishads, and Bhagavad Gita. These texts provide significant pedagogical ideas that are pertinent to contemporary teacher preparation. This paper explores how incorporating IKS into teacher education curricula can foster critical thinking, ethical awareness, cultural rootedness, and ecological sensitivity among future educators. It highlights the importance of experiential learning, reflective practices, community engagement, and value-oriented instruction inspired by traditional Gurukul systems. By blending indigenous epistemologies with contemporary educational frameworks, teacher education programs can nurture educators who are not only professionally competent but also socially responsible and emotionally balanced.

Keywords: Indian Knowledge System, National Education Policy 2020, Teacher Education, Holistic Development.

INTRODUCTION

The foundation of societal advancement is education, which shapes people and societies. However, the emphasis on memorisation in the current Indian educational system has frequently been criticised for being detached from the nation's rich cultural legacy and variety of knowledge systems (Batra, 2015). By promoting holistic development through the integration of Indian Knowledge Systems (IKS), which include fields like Ayurveda, Yoga, traditional architecture, astronomy, mathematics, and literature, the National Education Policy (NEP) 2020 aims to solve this. India's intellectual legacy can be preserved and a more inclusive, culturally aware, and all-encompassing approach to education can be fostered by integrating IKS into higher education curricula (Singh & Kumar, 2023). IKS is still important today because of its practical applications in science, education, and wellness in addition to its depth of philosophy. The NEP 2020 recognizes the potential of IKS in providing holistic, interdisciplinary, and values-based education. For teacher education in particular, NEP 2020 advocates training educators to appreciate and apply these indigenous frameworks in contemporary contexts. The term IKS is a broad expression that encompasses almost every aspect of India. Since it has a rich cultural and archaeological heritage, literary works, and diverse social and community practices, it is a very difficult and challenging task to define what truly constitutes 'Indian knowledge'. The phrase IKS itself is composed of three key components: Indian, Knowledge, and Systems. Mahadevan *et al.* (2022), in their book 'Introduction to Indian Knowledge System: Concept and Application', elaborate on each term of IKS explicitly and provide a holistic definition. The 'Indian' refers to the undivided cultural and geographical region historically known as *Akhanda Bharata*, encompassing a shared heritage beyond modern political boundaries. 'Knowledge' in this context is both tacit and explicit, spanning spiritual, philosophical, scientific, and everyday domains. The 'System' aspect signifies a structured, codified, and interconnected body of knowledge. Thus, Indian knowledge systems refer to a comprehensive system of knowledge that incorporates concepts from several disciplines, philosophical ideas, and practical methods that have been used for ages throughout the Indian subcontinent (Sujan Biswas, 2021). IKS is a multifaceted and integrated way of looking at the cosmos and human life, ranging from the abstract spiritual intuition of Vedanta to the intricate medical systems of Ayurveda, from the precise timing of Jyotisha to the grace of dance and music in Indian classical arts. However, IKS is no longer included in the majority of curricula and curricula due to the globalisation of knowledge that was prevalent during colonial times (Mahesh, Aithal & Sharma, 2023).

Objectives of The Study

The objectives of the present study are as follows: -

1. To overview the Indian knowledge system.
2. To Examine integration of Indian knowledge system in Teacher Education.
3. To highlight the Key Insights for Teacher Education from NEP 2020 Based on IKS.
4. To Explore the Challenges and strategies for Integration of Indian knowledge system in Teacher education.

Understanding Indian Knowledge Systems

The fundamental belief in the unity of life and the cosmos is the primary—and possibly most significant—underlying complex of Indian knowledge systems. IKS views knowledge as a chance for human self-actualization and contribution to both the self and the world, rather than as a storehouse of facts (Ambika

& Priya, 2024). This comprehensive viewpoint is based on a number of fundamental ideas: This comprehensive viewpoint is based on a number of fundamental ideas:

Interconnectedness: IKS emphasises the interdependence of individuals, society, and the environment, as well as the unity of opposites. As a result, the comprehension fosters a sense of responsibility toward both the natural world and other people.

Holistic Development: IKS is part of the educational paradigm that moulds an individual's physical, mental, and spiritual selves. It makes the assumption that knowing is more than just knowing facts; it also includes knowing how to behave morally, how to feel, and even how to pray.

Experiential Learning: knowledge in IKS is a function of direct experience and observation leading to enhancement of status quo. Instead of rote memorisation, education involves direct interaction with teachers, following the evolution of nature, and doing experiments.

Ethical Values: It goes without mention that ethical approach and moral qualities are entitled in IKS. It particularly aims at the tenets like honesty, humility, non-violence, benevolence, and lack of selfishness as relevant for the wellbeing of the person and the society.

Pursuit of Wisdom: IKS holds that the purpose of life is to acquire wisdom and knowledge. Able wisdom is defined as understanding the world in order to achieve freedom from it, not as bookish knowledge. Numerous IKS fields, many of which are highly relevant to modern education, embody these conceptual underpinnings (Gupta, 2024).

Yoga: Beyond its physical postures, Yoga offers techniques for self-discipline, concentration, and emotional regulation, fostering mental clarity and well-being in students.

Ayurveda: India's ancient system of medicine emphasizes preventive healthcare, healthy lifestyle practices, and a deep understanding of the interconnectedness of mind, body, and environment.

Vastu Shastra: This traditional Indian system of architecture emphasizes harmony between human dwellings and the natural environment, promoting sustainable living and well-being.

Gandharva Veda: Indian classical music and dance forms are not merely entertainment but sophisticated systems of knowledge that cultivate aesthetic sensibility, discipline.

NEP-2020: A paradigm shift: -

A paradigm shift in India's educational philosophy is signalled by NEP-2020, which acknowledges the importance of embracing Indigenous knowledge systems for comprehensive learning. (Sree Devi and Devi) Instilling a feeling of pride and cultural identity in students while providing them with 21st-century skills is the goal of the Policy, which promotes the integration of the Indian knowledge system across disciplines.

Integration of IKS in Teacher Education

NEP 2020 promotes multilingual education, research, and the integration of IKS into the curriculum. This includes:

- Curriculum Development: Including IKS in the curriculum for a variety of areas, from the humanities and arts to science and technology.
- Research and Development: Promoting an interdisciplinary approach by supporting research on IKS and its use in modern sectors.
- Multilingual Education: Encouraging the use of Indian languages in the classroom while acknowledging their contribution to the transmission and preservation of IKS.

- **Teacher Training:** Including IKS in teacher education programs will equip teachers to successfully incorporate it into the curriculum and support a learning philosophy that is holistic.

Key Insights for Teacher Education from NEP 2020 Based on IKS

1. Integration of Indian Knowledge Systems (IKS)

Holistic understanding: Teachers should be trained to include ancient Indian ideas into their pedagogy, including those found in the Vedas, Upanishads, Ayurveda, Yoga, and ethical/moral teachings.
Contextual relevance: Teachers need to be aware of and explain how IKS connects to modern society and science.

2. Multidisciplinary and Value-Based Education

- IKS is interdisciplinary by nature, integrating philosophy, health, the arts, and science.
- Inspired by IKS, teacher education programs will prepare teachers to embrace value-based education that emphasises truth, compassion, self-discipline, and sustainability.

3. Use of Local and Indigenous Knowledge

- Priority is given to local customs, dialects, arts, and knowledge systems.
- To promote cultural pride and environmental responsibility, educators must be ready to honour, record, and integrate local knowledge into their lessons.

4. Curriculum Revamp in Teacher Education

- IKS, Sanskrit, Indian logic systems (Nyaya), and Indian pedagogical traditions (such as the Gurukul system and experiential learning) will all be covered in new B.Ed. programs starting in 2023.
- Instructors will learn how to critically compare Western and Indian pedagogies.

5. Professional Development Through IKS

- Modules on yoga, mindfulness, and Indian-style ethics will be part of the in-service training.
- promotes self-reflection and reflective teaching methods based on Indian epistemologies.

6. Language and Cultural Heritage

- A focus on using the mother tongue or local language as a teaching medium to effectively apply IKS.
- Teachers must be fluent in the local tongues and have knowledge of India's linguistic and cultural legacy.

7. Research and Innovation in IKS

- Teachers will be encouraged to undertake action research in traditional knowledge practices.
- New research centres in IKS will offer fellowships and training for educators.

8. Inclusive and Ethical Teaching Practices

- Teacher education would emphasise equity, compassion, and democratic ideals, drawing on inclusive Indian philosophies such as Sarvodaya (upliftment of all) and Ahimsa (non-violence).

Benefits of Integrating IKS in Teacher Education

- **Promotion of Holistic Development:** The balanced development of the body, mind, intellect, and spirit is emphasised by IKS. Mental health and emotional stability are enhanced by ideas like self-discipline, yoga, meditation, and ethics. Future educators who have received training in these concepts can foster the moral, social, emotional, and cognitive development of their students.
- **Strengthening Cultural Identity and National Pride:** Teachers can better comprehend India's rich intellectual legacy by using IKS. It promotes reverence for native customs, languages, artwork, and ideologies. Teachers take on the role of cultural ambassadors, spreading ideals of harmony in diversity.

- **Value-Based Education:** IKS places a strong emphasis on virtues like compassion, selfless service, truth (Satya), and non-violence (Ahimsa). IKS-integrated teacher education programs equip educators to set an example of moral behaviour.
- **Contextual and Experiential Learning:** Experiential and discussion-based learning were key components of ancient Indian pedagogy (e.g., Guru–Shishya tradition). Learning was dialogic, introspective, and inquiry-based. IKS-trained educators are taught to use learner-centred, experiential, and activity-based approaches.
- **Promotion of Indigenous Scientific Knowledge:** India has made substantial contributions to the fields of mathematics, astronomy, metallurgy, and medicine. It promotes research based on regional expertise and customs. Teachers are able to make connections between current scientific advancements and traditional knowledge.
- **Alignment with National Educational Goals:** Indian Knowledge Systems should be incorporated into teacher education and curricula, according to the National Education Policy 2020. It seeks to produce internationally capable yet rooted citizens. IKS-trained educators contribute to the realisation of the goal of culturally grounded education.
- **Professional and Personal Empowerment of Teachers:** IKS promotes self-realization, self-discipline, and lifelong learning. Stress management is enhanced by techniques like yoga and meditation. Teachers acquire emotional fortitude and leadership skills.
- **Relevance to Contemporary Issues:** IKS can offer perspectives on how to deal with current societal problems and promote a better comprehension of the sociocultural setting.
- **Promoting National Identity:** By integrating IKS, a sense of pride in one's country is fostered and the link between heritage and modern education is strengthened.
- **Challenges and Considerations in Teacher Education**
- **Standardization and Validation:** To ensure accuracy, safety, and efficacy, frameworks for validating and integrating IKS with contemporary scientific procedures must be developed.
- **Language Barriers:** For IKS to be widely disseminated, language obstacles to old texts and knowledge must be addressed.
- **Resource Availability:** In order to facilitate classification, comprehension, and application, it is crucial to guarantee adequate financing, infrastructure, and skilled staff to support IKS projects.
- **Bridging the Gap between Theory and Practice:** The disconnect between classroom practice and theoretical understanding is one of the main issues in teacher education. Student instructors frequently acquire pedagogy, psychology, and educational philosophies in school, but many struggle to put these into practice in actual classroom settings. To guarantee practical competency, internships, classroom instruction, and reflective practices must all be incorporated into effective teacher education.
- **Quality of Curriculum and Training Programs:** Sometimes, teacher education programs use out-of-date curricula that don't meet the demands of modern education. Redesigning teacher education programs to support transdisciplinary learning, competency-based approaches, and holistic development is necessary in light of reforms like the National Education Policy 2020. Continuous monitoring and curriculum change are crucial factors.
- **Integration of Technology in Teaching:** Teachers must be tech-savvy due to the explosive expansion of digital education. Nevertheless, many institutions lack adequate training facilities and ICT

infrastructure. To fulfil the demands of 21st-century learning, teacher preparation programs must emphasise digital literacy, online pedagogy, and the efficient use of educational technology.

- **Addressing Diversity and Inclusion:** Language, culture, socioeconomic status, and learning styles are all varied in today's classrooms. It is still very difficult to prepare instructors for special needs education, gender sensitivity, and inclusive education. Equity, multicultural awareness, and inclusive teaching methods must be prioritised in teacher preparation programs.
- **Professional Ethics and Value Orientation:** Teaching is a social responsibility in addition to a career. One of the most important factors is helping instructors develop their commitment, empathy, professional ethics, and leadership abilities. In addition to academic preparation, teacher education programs ought to emphasise character development and value-based education.
- **Continuous Professional Development (CPD):** Teacher learning does not end with certification. Rapid changes in curriculum, assessment methods, and educational policies require ongoing professional development.

Strategies of Integration of IKS in Teacher Education

To overcome the challenges and ensure the effective integration of the Indian Knowledge System into the Teacher education system, the following strategies can be considered.

Comprehensive Curriculum Development: Encourage collaborative research initiatives between academia, traditional knowledge holders, and community representatives to explore and validate the scientific and practical relevance of IKS. Facilitate dialogues and knowledge-sharing platforms to foster a deeper understanding and appreciation of the Indian Knowledge System.

Teacher Capacity Building: Develop a comprehensive and well-structured curriculum that seamlessly integrates relevant aspects of the Indian Knowledge System into various subject areas.

Promote Collaborative Research and Dialogues: To investigate and confirm the scientific and practical applicability of IKS, support cooperative research projects including academic institutions, traditional knowledge holders, and community leaders. Encourage discussions and forums for information exchange to promote a better comprehension and admiration of the Indian Knowledge System.

Develop Engaging Teaching-Learning Materials: Provide dynamic and captivating instructional materials, including multimedia materials, textbooks, and practical exercises, that successfully convey to students the concepts and uses of the Indian Knowledge System in a contemporary and approachable way.

Establish Centres of Excellence for IKS: Create specialised Centres of Excellence for the Indian Knowledge System that can act as centres for knowledge and practice sharing, education, and research. To promote the incorporation of IKS in education, these centres might work with educational institutions, neighbourhood associations, and legislators.

Leverage Digital Technologies: To increase the accessibility and reach of IKS-integrated instructional content, especially in rural and underserved areas, make use of digital technologies including virtual simulations, online learning platforms, and multimedia resources.

Promote Awareness and Advocacy: To spread knowledge about the importance, applicability, and contributions of the Indian Knowledge System, launch extensive awareness and advocacy efforts. To promote a greater comprehension and appreciation of IKS, these campaigns can target a variety of stakeholders, such as students, parents, educators, legislators, and the general public.

Develop Interdisciplinary Partnerships: Create solid multidisciplinary alliances between the community, research institutions, academia, and traditional knowledge holders. organizations to promote the sharing of

best practices, knowledge, and skills for the successful incorporation of IKS into the teacher education curriculum.

Ensure Inclusive and Equitable Implementation: Create plans to guarantee that all students, irrespective of their socioeconomic, cultural, or geographic backgrounds, may access and benefit from the incorporation of IKS into the teacher education system. This may involve the identification and incorporation of diverse perspectives and representations within the IKS- integrated curriculum.

Continuous Evaluation and Refinement: Establish thorough monitoring and assessment procedures to gauge how well IKS integration is working in the educational system. To guarantee the ongoing development and applicability of IKS integrated education, gather input from stakeholders on a regular basis, evaluate data, and enhance the curriculum and implementation techniques.

CONCLUSION

A revolutionary step toward achieving the goal of holistic and culturally grounded education outlined in the National Education Policy 2020 is the incorporation of Indian Knowledge Systems (IKS) into teacher education. Teacher education can transition from disjointed and examination-focused approaches to a more integrated model of learning by acknowledging the depth of India's intellectual traditions and incorporating them into modern pedagogical frameworks. IKS provides an all-encompassing perspective that prioritises the search for wisdom, ethical growth, experiential learning, and connection. These ideas foster educators who are socially conscious, emotionally stable, intellectually capable, and spiritually conscious when they are integrated into teacher preparation. In order to translate policy vision into classroom reality, teacher education institutions are essential. Teachers can be prepared to connect traditional knowledge with contemporary scientific understanding through curriculum redesign, the incorporation of indigenous ideologies, bilingual approaches, and research projects grounded in local contexts. Both subject understanding and pedagogical practice are enhanced when disciplines like yoga, Ayurveda, Indian logic, classical arts, and environmental ethics are incorporated into teacher preparation programs. It allows aspiring educators to embrace the Guru-Shishya tradition's learner-centred, introspective, and inquiry-based methods while staying true to international standards of professionalism and creativity. However, careful preparation and consistent dedication are necessary for the successful integration of IKS. Collaborative research, institutional support, and ongoing professional development are necessary to solve issues including standardisation, validation, language hurdles, resource limitations, and the requirement for qualified faculty. Crucially, the integration of IKS supports both nation-building and academic enrichment. It fosters pride in indigenous heritage, fortifies cultural identity, and advances ideals like sustainability, equity, compassion, and non-violence. Teachers who receive training in this paradigm become social change agents who may help students live moral lives and be responsible citizens. Teacher education can develop educators who can address issues of diversity, environmental sustainability, mental health, and inclusive growth by fusing traditional wisdom with modern concerns.

In summary, incorporating Indian Knowledge Systems into teacher education is a philosophical reorientation of the educational process rather than just an academic change. It balances theory with practice, knowledge and values, and tradition and modernity. An education system that is both internationally relevant and firmly rooted in India's civilisational legacy is made possible by such integration. Teacher education can genuinely become a road to comprehensive growth with perseverance, creativity, and dedication, enabling educators to mould future generations with knowledge, skill, and cultural awareness.

REFERENCES

1. Baral.s.(2024) Integrating IKS for Holistic Development through NEP-2020 BASED APPROACH THROUGH INDIA'S NEP 2020. HOLISTIC AND OUTCOME-BASED PARADIGM IN NEP 2020.
2. Batra, P. (2015). Curriculum in India: Narratives, debates, and a deliberative agenda.
3. Biswas, S. (2021). *Indian Knowledge System and NEP 2020 Scope, Challenges and Opportunities. National Journal of Hindi & Sanskrit Research, 1(39), 179-183.*
4. Booii, K., & Khuzwayo, M. E. (2018). *Sciences Teacher Education Curriculum Re-Alignment: " Science Education Lecturers' Perspectives of Knowledge Integration at South African Universities". Journal of Curriculum and Teaching, 7(1),52-63.*
5. Chang, E. Y., & Chang, E. J. (2023). Discovering Insights Beyond the Known: A dialogue between Curriculum studies in India: Intellectual histories, present circumstances (pp. 35-63). Springer.
6. Devi, G. N., & Sreedevi, P. TRANSFORMING EDUCATION: EMBRACING HOLISTIC AND OUTCOME.
7. Dyer, C., Choksi, A., Awasty, V., Iyer, U., Moyade, R., Nigam, N.,... & Sheth, S. (2004). *Knowledge for teacher development in -service education. International Journal of Educational Development, 24(1), 39-52.*
8. Education Institutions: A Systematic Review. *UNIVERSITY NEWS, 61, 37.*
9. Gudmundsdottir, D. G., Ledertoug, M. M., & Olafsdottir, A. S. (2022). Co-creation and
10. Gupta, A. (2024). *A study of the scientific approach inherited in the Indian knowledge system (IKS). The Scientific Temper, 15(02), 2385-2389.*
11. Kumar, K., Bhattacharya, S. P., & Mishra, P. (2022). *Healing Cities: An IKS Approach towards Sustainable Development in Historic Indian Cities. In Robit Omar (Eds), Science and Philosophy in Indian Knowledge System, (pp-102-108), New Delhi.*
12. Morote, R., Las Hayas, C., Izco-Basurko, I., Anyan, F., Fullaondo, A., Donisi, V., Zwiefka, A., regional adaptation of a resilience-based universal whole-school program in five European regions. *European Educational Research Journal, 21(1), 138-164.*
13. Singh, S. K., & Kumar, P. R. V. (2023). Need for Pedagogical Training of Teachers in Higher
14. Wolk, M. A. (2021). *American Indian Culture and Secondary Science Curricula: Examining the Confluence of Native Epistemologies and US Public Education Science Standards* The University of Wisconsin-Milwaukee].