INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD)
© 2026 IJNRD | Volume 11, Issue 10, October 2026 | ISSN: 2456-4184 | IJNRD.ORG

The Indian Knowledge System and Pedagogy Innovation in Primary Education in Northeast India. A conceptual exploration.

Bem Minu*, Research Scholar. Department of Education, Rajiv Gandhi University, Rono Hills, Arunachal Pradesh. Email-minubem66@gmail.com

Dr. Tage Monju, Assistant Professor, Department of Education, Rajiv Gandhi University, Rono Hills, Arunachal Pradesh. Email: manju.tage.@rgu.ac.in**

Abstract

The Indian Knowledge System offers valuable prospects for pedagogical innovation in primary education by integrating knowledge with lived experience, ethical value, cultural practices and nature. The National Education Policy (NEP) 2020 also focuses on experiential learning, multilingual learning, inclusive learning and the integration of India's diverse knowledge traditions into education. But the pedagogical innovation of indigenous knowledge in Northeast India requires great attention. Northeast India, rich in linguistic diversity, oral traditions, ecological richness and community-based knowledge practices, offers opportunities to develop culturally responsive and relevant approaches to primary education. The present study explores how the Indian Knowledge System can inform pedagogical innovation through storytelling, experiential learning, mother tongue-based instruction, community participation and traditional ecological knowledge. This study adopts a conceptual approach based on secondary data, including research literature, educational policy documents and published reports. The analysis suggested that integrating indigenous knowledge with classroom teaching supports foundational learning, creativity, critical thinking, cultural appreciation and environmental awareness. However, there are some challenges, such as linguistic barriers, inadequate teacher preparation, curriculum constraints, limited documentation and concerns that cultural representation requires careful attention. The paper argues that Indian Knowledge System-based pedagogical innovation should be inclusive, community-involved and critically investigated to connect contemporary educational knowledge. The study concludes that integration of the Indian Knowledge System can contribute to more meaningful and culturally responsive primary education.

Keywords: Indian Knowledge System, NEP 2020, Primary Education, Pedagogy Innovation, Indigenous Knowledge, Northeast India.

Introduction

Education plays a significant role in human development, social transformation, and a country's overall growth. Every country aims to provide quality education to its citizens, as it leads to building a better and stronger society. The prime goal of every nation is to achieve sustainable development and social well-being. On this note, the Indian Knowledge System plays an important role in ensuring sustainable economic growth, preservation of social and cultural practices and harmonious integration within society (Ahmed, 2013).

The Indian Knowledge System represents a diverse and dynamic body of traditional wisdom that is rooted in ancient texts, indigenous tradition, and cultural practices. It is not merely a static tradition but an evolving process of knowledge that is transmitted from one generation to the next. The term Indian Knowledge System is grounded in the Vedic literature, the Vedas, Upanishads, and the Upvedas. It comprises three core components: Jnan (knowledge), Vignan, which refers to "Science" and Jeevan Darshan (Philosophy of life). These dimensions have evolved through observation, experimentation, lived experience, and critical inquiry by ancient scholars. The Indian knowledge tradition is both rich and unique, characterised by a holistic approach that seeks equilibrium between life and science, the material and the transcendental, along with Karma (action) and Dharma (duty),

balancing enjoyment with restraint and sacrifice. If we see history, the Indian Knowledge System has emphasised the integration of moral, material, spiritual, and intellectual values, with its origins traceable to the Rigvedic period (Mandavkar, 2025).

Northeast India is known for its rich, vibrant cultural diversity and also for its unique geographical features. The Northeast states comprise eight states, but are often referred to as the "Seven Sisters", namely Arunachal Pradesh, Assam, Meghalaya, Manipur, Nagaland, and Tripura. These states are home to many indigenous communities. These regions have faced numerous challenges, such as infrastructural constraints, accessibility constraints, and a lack of development in comparison to the mainland of the country. These significantly obstacles to the establishment and growth of education areas (Taba, 2023). The communities of this region are deeply connected with the knowledge of ecology, medicine, agriculture, and social organisation, which has been passed down from one generation to the next. The integration of these knowledge systems into primary education can enhance the relevance and effectiveness of teaching. Primary education plays a key foundation of formal education for further higher education. The quality of primary education has become a concern for all, and its weakness may hamper interest in higher education and professional development (Sharma, 2019). Primary education is a crucial stage for the child's development, where foundational skills are shaped and positive attitudes are formed. Introducing IKS-based pedagogical practices at this stage can foster critical thinking, creativity, and cultural awareness, which are among the prime objectives of the NEP 2020, and help transform the education system by fostering holistic learning. It also strongly emphasised integrating Indian Knowledge Systems into modern education to enable students to benefit from the country's rich intellectual and cultural heritage (Lone and Kour, 2024). This study explores how incorporating Indian Knowledge Systems can drive pedagogical innovation in primary education across Northeast India.

Review of related literature

Singh (2024) examined the integration of the Indian knowledge systems in education and their potential to develop students' problem-solving abilities through innovative pedagogies aligned with the National Education Policy (NEP) 2020. The study highlighted that the incorporation of the Indian knowledge system into the curriculum can bring a transformative shift to the education system by connecting classroom learning with India's rich cultural, spiritual, and intellectual tradition. It also emphasised the importance of experiential learning, which encourages students to participate actively in the learning process, engage directly with subject matter, and develop a deeper understanding of concepts, ultimately contributing to better learning outcomes.

Chaturvedi and Kumar (2025) explored how pedagogical practices rooted in Indian Knowledge Systems can contribute to the development of social values and fraternity among learners. The study revealed that pedagogy should reflect students' cultural backgrounds and social experiences. Such an approach can nurture empathy, cooperation, mutual respect, and a sense of belonging within the community.

Sobel (2004), in a study of place-based education at a primary school in Talhogang, Bhutan, highlighted the value of using the local community as an extension of the classroom. The study demonstrated how learning through local experiences and real-life situations can make education more meaningful and relevant to students. It also highlighted the importance of authentic assessment, school gardens, and environmental activities in helping learners understand their surroundings and develop a sense of civic responsibility. Through such experiences, students can become more aware of local issues and more actively involved in their communities.

Das et al. (2025) investigated the integration of Traditional Ecological Knowledge (TEK) into formal education in Northeast India. The study highlighted the potential of incorporating indigenous knowledge into the education system to address challenges such as cultural erosion, environmental degradation, and the disconnect between formal schooling and indigenous learners' lived experiences. It further suggested that recognising traditional ecological practices and community knowledge can make education more inclusive, culturally relevant, and

community knowledge can make education more inclusive, culturally relevant, and environmentally sustainable. This approach can help students to understand their relationship with the natural environment.

Vas (2024) investigated the integration of traditional Indian knowledge into the modern education system and emphasised the need to restructure the curriculum to accommodate this traditional knowledge. The study discussed how traditional knowledge can be meaningfully incorporated into contemporary education to make learning more relevant and holistic. Similarly, studies by Joshi and Patil (2020), Meitei and Devi (2024), Nayak and Padhi (2024), and Verma, S. (2025), have explored the importance of indigenous pedagogies such as experiential learning, storytelling, dialogue, and community-based learning in the implementation of the Indian Knowledge System (IKS). Existing discussions of the Indian Knowledge System highlight its importance in cultural preservation, experiential learning and holistic education. However, conceptual and practical attention is needed to understand how these dimensions can work together to transform primary school pedagogy in Northeast India. This gap suggests the need to examine their relationship and explore how they may contribute to learner-centred, culturally responsive and contextually relevant primary education.

Objectives:

1. To examine the conceptual foundation of Indian knowledge systems and their relevance to pedagogical innovation in primary education.
2. To explore how the Indian Knowledge System can contribute to pedagogical innovation.
3. To analyse the relevance of the indigenous knowledge tradition in northeast India for developing culturally responsive pedagogy.

Methodology

The present study adopts a conceptual study based on secondary sources. The information has been collected from journals, articles, websites, policy documents, and research reports related to Indian knowledge systems, indigenous education, and primary school.

Conceptual understanding of Indian Knowledge System and Pedagogy

Indian knowledge systems are rooted in a holistic understanding of life, integrating intellectual, moral, spiritual, and practical aspects of life. Traditionally, learning in India extended beyond textbooks and formal classroom settings. Children and young learners acquired knowledge through everyday experiences, participation in community activities, observation of their surroundings, and interaction with nature and society. Knowledge was often passed from one generation to another through practices, dialogue, storytelling, and shared experiences. An important feature of IKS-based pedagogy is experiential learning, which enables students to develop knowledge through direct involvement, observation, and practical activities. Rather than relying solely on theoretical explanations, this approach encourages learners to connect classroom concepts with situations they encounter in everyday life. Such connections can help students develop a clearer understanding of concepts and retain what they learn more effectively (Singh, 2024). Oral traditions and dialogic-based methods also contribute an important part of the Indian Knowledge System of pedagogy. The teaching-learning process is often based on storytelling, discussion, questioning, and reflection, which help children to develop critical thinking and communication skills. These methods provide an opportunity for an interactive learning environment where students actively participate rather than passively receive information (Vas, 2024).

Pedagogy Innovation through Indian Knowledge in Primary Education

Pedagogical innovation through the integration of IKS in primary education promotes holistic learning by fostering critical thinking, ethical development and experiential understanding. These approaches are deeply rooted in India's traditional educational practices, which emphasise learning through observation, inquiry, reflection, and lived experience, closely aligning with the vision of NEP 2020, which advocates for culturally

responsive and contextually relevant education (Nayak). The following are the key features of the Indian Knowledge System-based pedagogy:

Experiential learning: Experiential learning is a core component of IKS-based pedagogy. It involves engaging students in real-life experiences to understand. Activities like field visits to historical sites, traditional Gurukuls, local communities, and nature trails offer students hands-on exposure to living traditions.

Storytelling and narratives: Storytelling is an effective pedagogical way that is rooted in Indian tradition. Ancient texts and folk literature, such as the Puranas, Jataka tales, Panchatantra, and other indigenous narratives, are used to teach moral values and ethical reasoning, and cultural history. These methods help in conveying like skills, developing imagination, and simplifying complex subject concepts in an engaging and relatable manner.

Multilingual Education: The use of the mother tongue as the medium of instruction at the primary level enhances comprehension, participation, and cognitive development. The NEP 2020 strongly emphasises multilingual education, particularly in early childhood and primary schooling. Northeast India, with its rich linguistic diversity, provides an excellent context for implementing multilingual education. This diversity provides children with opportunities to learn in their native language while also gaining exposure to other regional and national languages.

Environmental education: The Indian Knowledge System places an important emphasis on living in harmony with nature. indigenous communities possess a rich understanding of the natural environment through generations of interaction, experience, and observation with their surroundings. Incorporating this traditional ecological knowledge into the school curriculum can help encourage children to respect natural resources, understand the need for biodiversity conservation, and recognise their responsibility towards protecting the environment.

Relevance to Northeast India

The use of local languages in education is particularly important in Northeast India, a region known for its linguistic and cultural diversity. The region is home to numerous indigenous communities, each with its own language, dialect, traditions, and cultural expressions. When children face an unfamiliar language, they may find it difficult to understand lessons, express their thoughts, and participate confidently in classroom activities. This can create a gap between their home experiences and school learning, especially during the primary years. Teaching children in their mother tongue or familiar local language can help reduce this gap by making concepts easier to understand and encouraging active participation. It also creates opportunities to connect classroom learning with local culture, community knowledge, and everyday experiences, making education more inclusive and meaningful for children in Northeast India. Using the local language during the primary stage makes learning more relatable and culturally meaningful, helping to bridge the gap. The National Education Policy 2020 strongly advocates the use of the mother tongue or regional language as the medium of instruction at least until 5 and preferably beyond. The NEP 2020 recognises that children learn best when they are taught in a language they understand and are familiar with. Furthermore, the NEP 2020 highlights the importance of multilingualism and encourages schools to provide students with opportunities to learn multiple languages. Therefore, promoting local language instruction in primary education not only enhances learning outcomes but also contributes to inclusive, equitable, and culturally responsive education, particularly in linguistically diverse regions like Northeast India (Naro and Muddgal, 2023).

Challenges and implementation

Despite its benefits, integrating IKS into primary education faces several challenges. The following factors pose challenges to implementation.

1. **Insufficient teacher training**: Several teachers are trained in conventional, exam-oriented systems. However, they may lack knowledge about IKS and the skills to teach through IKS modes. (Tripathy and Mishra, 2025)

2. **Lack of curriculum frameworks**: It is essential to have a balanced curriculum that harmonises traditional and modern knowledge without overwhelming students. A study by Gaur, S. A survey by NITI Aayog (2023) found that 45% of educational institutions face difficulties in balancing IKS with existing curricula due to syllabus overload.
3. **Language barrier:** Indian languages are often used to convey IKS. Those teachers and students who don't know these languages may create a linguistic barrier.
4. **Pedagogical barrier:** In contrast to traditional structured curricula, experiential learning is the foundation of traditional IKS. A major problem is creating a curriculum that satisfies contemporary educational standards while incorporating oral traditions and ancient texts. (Puri, 2025).
5. **Limited research and documentation:** most of the traditional knowledge exists in oral and fragmented form, which will make it difficult for educators to access and integrate it into contemporary education. (Kaur, 2025).

Recommendations for strengthening IKS in Education

The following recommendations are proposed to support the effective integration and promotion of the Indian Knowledge System (IKS) within the educational framework.

1. Teacher training and capacity building: Effective integration of the Indian Knowledge System (IKS) into education largely depends on teachers' understanding of traditional knowledge and their ability to use appropriate teaching methods. Teachers need to know about different aspects of the Indian Knowledge System (IKS) and understand how these can be encouraged through interdisciplinary teaching by linking traditional knowledge with subjects such as science, health, environmental studies, and philosophy. Teachers should also learn how to relate this knowledge to real-life situations so students can understand it in the present context. The teaching method is equally important, that value students' cultural backgrounds, local traditions, and community knowledge. For this purpose, teacher education programmes should include specific modules on Indian Knowledge (IKS) pedagogy, enabling future teachers to combine traditional wisdom with modern educational approaches.

2. Policy implementation: Although the National Education Policy (NEP) 2020 recognises the importance of incorporating the Indian Knowledge System (IKS) into education, its effective implementation is required at both national and institutional levels. This includes developing suitable curriculum materials, providing adequate financial resources, establishing monitoring systems, and encouraging schools and universities to adopt the Indian Knowledge System (IKS) in their teaching and learning practices. Effective coordination among policymakers, teachers, researchers, and traditional knowledge holders is also essential. Their collective efforts can help translate policy into real action.

3. Institutional support: Institutional support plays an important role to play in preserving, developing, and promoting the Indian Knowledge System (IKS). Educational institutions should be encouraged to establish dedicated departments, research chairs, and interdisciplinary centres that encourage the study of traditional knowledge. Such initiatives can create opportunities for collaboration among IKS scholars, educators and researchers from different fields. This exchange of ideas can contribute to further research, innovation, and a deeper understanding of traditional knowledge. In addition, universities can introduce credit-based elective courses on IKS to integrate it into mainstream education and attract students' interest. These measures can help bring IKS into mainstream education and encourage greater academic interest in intellectual and cultural heritage.

4. Use local language as the medium of instruction: The use of the mother tongue is particularly important during the primary years of education. Children generally find it an easier way to understand new ideas when they are taught in a language they already know. It also gives children greater confidence to express their thoughts, ask questions, and participate in classroom discussions. In a linguistically diverse region, such as Northeast India, the use of local languages can help bridge the gap between children's home environments and school experiences.

It can also contribute to the preservation of linguistic and cultural diversity by recognising the value of indigenous traditions. It also aligns with the vision of the NEP 2020, which emphasises mother tongue-based education in the early years to improve learning outcomes and make education more inclusive and meaningful. (Kaur, 2025)

Conclusion

The integration of the Indian Knowledge System (IKS) into primary education provides a meaningful framework for reframing pedagogy in the foundational stage. By stressing practical learning, cultural values, and knowledge gained through interaction with the surrounding environment, an experiential approach aligns with the developmental needs of young learners to make education more engaging and culturally relevant in regions like Northeast India, where indigenous traditions, local languages and community-based knowledge play an important role in people's lives. Implementing these forms of knowledge in the classroom can help children better understand concepts while strengthening their cultural identity and creating a more inclusive learning environment. Despite its potential for integration of IKS into education, it requires attention to several challenges, such as limited teacher training, insufficient documentation and lack of structured curricula. The National Education Policy (2020) offers a supportive framework for this integration by emphasising experiential, culturally rooted and context-based learning. In this regard, integrating IKS into early education can help bring traditional wisdom and modern pedagogy, fostering holistic development and creating a more inclusive and culturally responsive education system.

Reference

Ahmed, S. (2013). State of primary education: Regional experience for Northeast India. *Journal of Northeast India Studies, 3*(1),41-60. http://www.jneis.com

Chaturvedi and Kumar (2025). Indian knowledge system and pedagogical practices to develop social goals and fraternity. *Indian Journal of Multidisciplinary Research (IJOMR), 2* (1). https://ijomr.org

Das, T. M., Medhi, M., & Banerjee, S. (2025). Indigenous knowledge systems and sustainable learning: A comprehensive regional analysis of Northeast India. *International Journal of Environmental Science, 11*(16). ISSN: 2229-7359. https://www.theaspd.com/ijes.php

Dr. Gokhale, R., Dr. Sharma, N., and Dr. Gujrati, R. (2025). Implementing IKS through Innovation Learning Pedagogies, the BMCC way. *International Multidisciplinary Journal (A Unique Treatise of Knowledge), 1* (3). ISSN: 3049-3927. DOI: htttps://doi.org/10.64328/aimjv01i030023

Dr. Kaur, S. (2025). Reviving roots: Indian knowledge system and modern pedagogical practices. *Journal of Emerging Technologies and Innovative Research (JETIR), 12* (5). ISSN: 2349-5162. www.jetir.org

Dr. Mandavkar, P. (2025). Indian Knowledge System (IKS) and National Education Policy (NEP-2020). SSRN: http://dx.doi.org/10.2139/ssrn.5205032

Dr. Tripathy, A. B. and Mishra, S. (2025). Bridging traditional and innovation: The role of the Indian Knowledge System in reimagining education today for Gen Z learners. *International Journal of Research and Innovation in Social Science (IJRISS), 9* (9). ISSN: 2454-6186. DOI: https://dx.doi.org/10.47772/IJRISS.2025.909000205

Dr. Vaz, D. (2024). Integrating Traditional Indian Knowledge into the Education System. *Tuijin Jishu/Journal of Propulsion Technology, 45* (1). ISSN: 1001-4055.

Lone, S. A., & Kour, S. J. (2024). Vivification of experiential learning with reference to NEP 2020. *The International Journal of Indian Psychology, 12* (1). ISSN: 2348-5396. DIP: 18.01.151. 20241201.https://www.ijip.in

Naro, G. and Dr. Muddgal, A. (2023). Mother tongue as a medium for teaching in schools of Nagaland: Problems and prospects. *International Journal of Creative Research Thoughts (IJCRT), 11* (5). ISSN: 2320-2882. www.ijcrt.org

Nayak, S. Integration of the Indian Knowledge system in teacher education. ISBN: 978-1-2579819-6-0. DOI: 10.25215/12579819X.22

Puri, J. (2025). IKS in Indian Education: A transformative framework for cultural continuity and academic innovation. *Advances in Consumer Research, 2* (4): 4299-4307

Ramanbhai, S.N. and Dr. Patel, S. (2025). Integrating Indian Knowledge System (IKS) in Education: Roles of Teachers, Schools, and Governments. *International Journal of Scientific Research in Humanities and Social Sciences, 2* (2). ISSN: 3048-8176. Doi: http://doi.org/10.32628/IJSRHSS252212

Sharma, D.C. (2019). Development of primary education in the northeastern region of India. *International journal of research in social sciences, 9* (5). ISSN: 2249-2496. http://www.ijmra.us

Singh, T. P. (2024). Integrating Indian knowledge systems in education: Enhancing problem-solving abilities through innovative pedagogies aligned with NEP 2020. *Indian e-journal on Teacher Education (IEJTE)*. www.iejte.org

Sobel, D. (2004). Implementation of place-based education: A case study in a primary school at Talhogang, Bhutan. *Scientific research an Academic Publisher, 12*(10).

Taba, P. (2023). Challenges and prospects of higher education in Northeast India: A comprehensive analysis. *international journal of novel research and development (IJNRD), 8* (9). ISSN: 2456-4184.

Copyright & License:
© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.