



Teacher Preparedness for Implementing Indian Knowledge Systems in Indian Classrooms

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Abstract:

The National Education Policy (NEP) 2020 emphasizes the integration of Indian Knowledge Systems (IKS) into school education as a way to reconnect learners with India's cultural and intellectual heritage. While this vision is transformative, its success depends largely on teacher preparedness. This study, employing a qualitative approach and secondary data, examines teachers' readiness to implement IKS in Indian classrooms and the challenges and opportunities associated with this process. Secondary sources, such as policy documents, government reports, and academic studies, indicate that teachers play a central role in translating policy into practice. Preparedness involves not only awareness of IKS but also the ability to integrate it meaningfully into subjects like mathematics, science, literature, health, and environmental studies. Teacher training programs, orientation workshops, and curriculum redesign are being introduced to support this transition. However, findings suggest that many teachers lack adequate exposure to indigenous knowledge traditions and struggle with limited resources, insufficient training, and the absence of culturally sensitive pedagogy. The study highlights that effective implementation requires teachers to move beyond superficial references to IKS and instead embed it deeply into classroom practices. This demands authentic resource development, collaboration with local knowledge holders, and continuous professional development. At the same time, opportunities exist: IKS can make learning more holistic, foster cultural pride, and connect education with real-life contexts. Well-prepared teachers can empower students to appreciate their heritage while developing modern competencies. Teacher preparedness is key to the successful integration of IKS under NEP 2020. Strengthening training, resources, and community involvement will ensure that IKS is not treated as symbolic content but as a meaningful part of education. This study underscores the importance of equipping teachers to act as facilitators of both modern knowledge and indigenous wisdom, thereby making education truly transformative.

Keywords: *Teacher Preparedness, Indian Knowledge Systems (IKS), National Education Policy 2020, School Curriculum, Indigenous Knowledge, Professional Development, Resource Development.*

Introduction:

Education is not only about transferring knowledge but also about shaping values, identity, and cultural understanding. The National Education Policy (NEP) 2020 highlights this broader role of education by emphasizing the integration of Indian Knowledge Systems (IKS) into school curricula. IKS refers to the rich traditions of knowledge developed in India over centuries, including contributions in mathematics, astronomy, medicine, literature, arts, yoga, and ecological practices. While the policy vision is clear, its success depends

largely on teachers' preparedness to implement IKS in classrooms. Teachers are the bridge between policy and practice. They play a central role in making IKS meaningful for students by embedding indigenous wisdom into everyday lessons. Preparedness involves not only awareness of IKS but also the ability to connect it with modern subjects in ways that are relevant and engaging. For example, a science teacher may integrate traditional ecological practices into environmental studies, while a physical education teacher may use yoga to promote health and well-being. Such integration requires training, resources, and confidence.

Secondary data shows that many teachers face challenges in this process. Limited exposure to indigenous knowledge traditions, lack of authentic teaching materials, and insufficient professional development opportunities often hinder effective implementation. Without proper preparation, there is a risk that IKS will be taught superficially, as token references rather than as meaningful content. At the same time, opportunities exist. Teachers who are well-prepared can make education holistic, foster cultural pride, and empower students to appreciate both modern competencies and traditional wisdom. This makes learning more inclusive and connected to real-life contexts. The study explores teacher preparedness for implementing IKS in Indian classrooms, employing a qualitative approach grounded in secondary data. It highlights both the challenges and opportunities, emphasizing the importance of equipping teachers to act as facilitators of holistic and culturally grounded education.

Need and Significance

The integration of Indian Knowledge Systems (IKS) into school education under NEP 2020 is a visionary step, but its success depends on teachers' preparedness to implement it in classrooms. The need for this study arises from the fact that teachers are the direct facilitators of learning. Without their awareness, training, and confidence, IKS may remain only a policy idea rather than a meaningful classroom practice. Teachers must be equipped to connect indigenous wisdom with modern subjects in ways that are relevant, engaging, and authentic. The need is especially strong because most teachers have been trained in conventional, Western-oriented curricula and may not have adequate exposure to India's traditional knowledge systems. They often lack resources, practical examples, and culturally sensitive pedagogy to integrate IKS effectively. If teachers are not prepared, there is a risk that IKS will be taught superficially, as token references, rather than as a deep and transformative part of education. This makes teacher preparedness central to the success of NEP 2020's vision. The significance of focusing on teacher preparedness lies in its potential to transform education. Well-prepared teachers can make learning holistic by blending modern knowledge with indigenous practices. They can foster cultural pride, sustainability, and ethical values among students, while also strengthening identity and confidence. Prepared teachers can also bridge the gap between schools and communities by involving local knowledge holders, artisans, and practitioners in classroom activities. This makes education more practical, inclusive, and connected to everyday life.

In addition, teacher preparedness ensures that IKS is not seen as outdated but as relevant to contemporary challenges. By training teachers to use authentic resources and innovative methods, education can become both globally competitive and culturally grounded. Therefore, studying teacher preparedness is critical because teachers are the key agents of change in implementing IKS. Their readiness determines whether NEP 2020's vision of holistic and culturally rooted education will succeed. The significance lies in empowering teachers to act as facilitators of both modern knowledge and indigenous wisdom, thereby making education truly transformative.

Table 1: Need and Significance of Teacher Preparedness for IKS Implementation

Aspect	Dimensions
Need for	Teachers are the direct facilitators of learning. Without their awareness, training, and confidence, IKS may remain only a policy idea rather than a meaningful classroom

Preparedness	practice. Preparedness ensures teachers can connect indigenous wisdom with modern subjects in relevant and engaging ways.
Gap in Current Training	Most teachers have been trained in conventional, Western-oriented curricula and lack exposure to India's traditional knowledge systems. They often face challenges such as limited resources, practical examples, and culturally sensitive pedagogy.
Risk Without Preparedness	If teachers are not adequately trained, IKS may be taught superficially, as token references, rather than as deep and transformative content. This undermines the vision of NEP 2020.
Significance for Students	Well-prepared teachers can make learning holistic, foster cultural pride, and empower students to appreciate both modern competencies and traditional wisdom. This strengthens identity, confidence, and inclusivity.
Significance for Teachers	Preparedness allows teachers to innovate, use authentic resources, and involve community knowledge holders in classroom activities. This makes education more practical and connected to everyday life.
Significance for Policy	Teacher preparedness ensures IKS is not seen as outdated but as relevant to contemporary challenges. It supports the NEP 2020's goal of making education globally competitive while remaining culturally grounded.
Major Aspects	Studying teacher preparedness is critical because teachers are the main agents of change. Their readiness determines whether NEP 2020's vision of holistic and culturally rooted education will succeed.

Literature Review

The National Education Policy (NEP) 2020 emphasises the integration of Indian Knowledge Systems (IKS) into school curricula, intending to reconnect learners with India's cultural and intellectual heritage. However, the effectiveness of this vision depends largely on teacher preparedness. Literature from 2023–2025 highlights both opportunities and challenges in equipping teachers to implement IKS meaningfully.

Policy Context and Vision

Badlakkanavar and Mali (2024) argue that NEP 2020 represents a fundamental shift in Indian education by embedding IKS into mainstream schooling. They note that teachers are expected to integrate traditional knowledge in mathematics, science, medicine, and philosophy alongside modern subjects, making education holistic and culturally grounded.

Teacher Education and Training

Recent discussions around the Integrated Teacher Education Programme (ITEP) emphasize the need for specialized training to prepare teachers for IKS integration. Padhi (2026) highlights that teacher education must move beyond conventional pedagogy to include indigenous knowledge traditions, experiential learning, and culturally sensitive practices.

Pedagogical Principles of IKS

Chakravorty (2026) explores how IKS incorporates unique pedagogical principles, including experiential learning, dialogic instruction, ethical orientation, and community engagement. These principles require

teachers to adopt innovative methods rather than rote learning. Preparedness, therefore, involves not only content knowledge but also pedagogical adaptation.

Opportunities Identified in Literature

1. Holistic learning: Teachers can blend modern subjects with indigenous practices, making education more inclusive.
2. Cultural pride: Prepared teachers help students connect with their heritage.
3. Practical relevance: Involving local knowledge holders enriches classroom teaching.
4. Sustainability and ethics: Teachers can embed ecological wisdom and value-based education.

Challenges

1. Limited exposure: Many teachers are trained in Western frameworks and lack familiarity with IKS.
2. Resource scarcity: Authentic textbooks and digital materials are still under development.
3. Superficial inclusion: Without training, IKS risks being presented as token content.
4. Balancing knowledge systems: Teachers must carefully integrate traditional wisdom with modern science to maintain relevance.

The literature emphasises that teacher preparedness is central to the success of IKS integration under NEP 2020. While policies and frameworks provide direction, teachers require continuous professional development, authentic resources, and community collaboration to implement IKS meaningfully. Studies agree that without adequate preparation, IKS may remain symbolic rather than transformative. Conversely, well-prepared teachers can make education holistic, culturally rooted, and globally relevant.

Objectives

1. To examine the level of teacher awareness and preparedness for integrating Indian Knowledge Systems (IKS) into classroom practices under NEP 2020 using secondary data.
2. To identify the opportunities and challenges faced by teachers in implementing IKS in Indian classrooms through a qualitative review of secondary sources.

Discussion

The integration of Indian Knowledge Systems (IKS) into school education under NEP 2020 is a visionary step that seeks to make learning holistic, culturally rooted, and globally relevant. However, the success of this initiative depends largely on teacher preparedness. Teachers are the ones who translate policy into practice, and their readiness determines whether IKS is taught meaningfully or remains symbolic. Using secondary data, this discussion explores the opportunities, challenges, and implications of teacher preparedness in implementing IKS.

Teachers as main Agents of Change

Teachers are central to the classroom experience. They not only deliver content but also shape values, identity, and cultural understanding. Preparedness in this context means having awareness of IKS, confidence in teaching it, and the ability to connect it with modern subjects. For example, a science teacher may integrate traditional ecological practices into environmental studies, while a language teacher may use

ancient literature to enrich lessons. Without adequate preparation, teachers may struggle to embed IKS meaningfully, leading to superficial inclusion.

Opportunities for Prepared Teachers

Secondary data highlights several opportunities when teachers are well-prepared. First, they can make education holistic by blending modern knowledge with indigenous wisdom. This helps students appreciate sustainability, ethics, and cultural pride. Second, prepared teachers can empower students to connect classroom learning with real-life contexts, making education more practical and inclusive. Third, teacher preparedness allows for community involvement, where local artisans, farmers, and practitioners contribute to classroom activities. This strengthens the bond between schools and communities and ensures that IKS is seen as living knowledge rather than abstract theory.

Challenges in Preparedness

Despite these opportunities, challenges remain. Many teachers have been trained in conventional, Western-oriented curricula and lack exposure to indigenous traditions. Teacher training programs are still evolving, and authentic resources such as textbooks and digital content are limited. Secondary data also reveals the risk of tokenism, where IKS is mentioned briefly without deep integration. Another challenge is balancing traditional wisdom with modern scientific knowledge. Teachers must ensure that IKS is presented as relevant and contemporary, not outdated or disconnected from global realities.

Policy Support and Implementation

Government initiatives under NEP 2020 have introduced curriculum redesign and teacher training modules, but their effectiveness depends on consistent implementation. Secondary data suggests that policy support alone is not enough; teachers need continuous professional development and access to authentic resources. Collaboration with local communities and knowledge holders is also essential to enrich classroom practices. Preparedness, therefore, is not just about training but about building a supportive ecosystem that values indigenous knowledge.

The discussion connects directly to the study's objectives. The first objective—examining teacher awareness and preparedness—shows that while policies exist, teachers often lack training and resources. The second objective—identifying opportunities and challenges—reveals that preparedness can empower students and make education holistic, but challenges such as resource scarcity and superficial inclusion must be addressed. So, teacher preparedness is the cornerstone of successful IKS integration under NEP 2020. Prepared teachers can transform education by making it holistic, culturally grounded, and globally relevant. However, without adequate training, resources, and community involvement, IKS risks being reduced to symbolic references. Strengthening teacher capacity, developing authentic materials, and fostering collaboration are essential steps to ensure that IKS becomes a meaningful part of classroom practice. This discussion underscores that teachers are not just facilitators of content but agents of cultural empowerment and holistic development.

Table 2: Discussion on Teacher Preparedness for Implementing IKS

Theme	Insights from Dimentions
Teachers as main Agents of Change	Teachers translate policy into practice. Preparedness means awareness of IKS, confidence in teaching it, and the ability to connect it with modern subjects. Without adequate preparation, IKS risks being taught superficially.

Opportunities for Prepared Teachers	Prepared teachers can make education holistic by blending modern knowledge with indigenous wisdom. They foster sustainability, ethics, and cultural pride. They empower students to connect learning to real-life contexts and to engage with communities, making IKS practical and engaging.
Challenges in Preparedness	Many teachers are trained in Western frameworks and lack exposure to IKS. Authentic resources remain scarce, and training programs continue to evolve. Risks include tokenism and difficulty balancing traditional wisdom with modern science.
Policy Support & Implementation	NEP 2020 has introduced curriculum redesign and training modules, but consistent implementation remains a challenge. Teachers require continuous professional development, authentic resources, and collaboration with local knowledge holders to enrich classroom practices.
Link to Objectives	Objective 1: Teachers often lack training and resources despite policy support. Objective 2: Opportunities include empowerment and holistic learning, whereas challenges include resource scarcity, superficial inclusion, and the balancing of knowledge systems.
Main Aspect	Teacher preparedness is the cornerstone of successful IKS integration. Strengthening teacher capacity, developing authentic materials, and fostering collaboration are essential to ensure IKS becomes a meaningful part of classroom practice. Teachers act as agents of cultural empowerment and holistic development.

Conclusion

The integration of Indian Knowledge Systems (IKS) into school education under NEP 2020 is a transformative vision that seeks to make learning holistic, culturally rooted, and globally relevant. However, the success of this initiative depends largely on teacher preparedness. Teachers are the ones who bring policy into practice, and their readiness determines whether IKS is taught meaningfully or remains symbolic. Secondary data indicate that, although policies and frameworks have been introduced, many teachers still face challenges, including limited exposure to Indigenous traditions, a lack of authentic resources, and insufficient training. Without proper preparation, IKS risks being reduced to token references rather than becoming a deep and engaging part of classroom learning. At the same time, opportunities exist for well-prepared teachers. They can foster cultural pride, connect education with real-life contexts, and empower students to appreciate both modern competencies and traditional wisdom.

The teacher's preparedness is the cornerstone of successful IKS integration. Strengthening teacher training, developing authentic resources, encouraging continuous professional development, and involving communities are essential steps to ensure that IKS is implemented meaningfully. Prepared teachers can act as facilitators of both modern knowledge and indigenous wisdom, making education more inclusive, practical, and empowering. The future of IKS in classrooms depends on the extent to which teachers are supported and equipped. With proper preparedness, they can transform education into a tool for cultural empowerment and holistic development, fulfilling the true spirit of NEP 2020.

Recommendations

The successful integration of Indian Knowledge Systems (IKS) into classrooms under NEP 2020 depends on how well teachers are prepared to implement it. Based on secondary data, several recommendations can be made to strengthen teacher preparedness.

First, comprehensive teacher training programs should be developed. These programs must go beyond basic orientation and provide in-depth exposure to indigenous knowledge traditions, practical applications, and culturally sensitive pedagogy. Training should also include workshops, field visits, and interactions with local knowledge holders to make learning authentic and experiential.

Second, the development of authentic resources is essential. Teachers require access to well-designed textbooks, digital content, and teaching aids that present IKS clearly and engagingly. Collaboration between policymakers, scholars, and community practitioners can ensure that resources are accurate, relevant, and easy to use in classrooms.

Third, continuous professional development should be encouraged. Teachers must be given opportunities to update their knowledge regularly through refresher courses, seminars, and peer-learning platforms. This will help them stay confident and innovative in integrating IKS.

Fourth, community participation should be promoted. Schools can invite artisans, farmers, healers, and storytellers to share their expertise, making IKS more practical and relatable for students. This also strengthens the bond between schools and local communities.

Finally, balanced integration is necessary. Teachers should be guided to blend IKS with modern scientific knowledge, ensuring that students gain both global competencies and indigenous wisdom.

Strengthening teacher training, resource development, professional growth, and community involvement will ensure that IKS becomes a meaningful and transformative component of Indian classrooms.

References

- Abbasi, A. E. (2024). Transforming teacher education through the integration of Indian Knowledge Systems: Insights from NEP 2020 and UGC guidelines. *CIJE Quarterly*, 9(2), 17–22. <https://www.echetana.com/wp-content/uploads/2024/08/4.-A-E-Arshi-Abbassi-5.pdf>
- Abbasi, A., & Rao, K. (2024). Pedagogical frameworks for teaching IKS: A teacher education perspective. *Journal of Indian Teacher Education*, 12(2), 88–105. <https://www.jitejournal.in/vol12/issue2/abbasi-rao.pdf>
- Bandyopadhyay, S., & Chakrabarti, D. (2024). Creating resource repositories and micro-modules for in-service teachers: A scalable model for IKS integration in Indian classrooms. *Education Innovation & Technology*, 2(3), 77–95. <https://eitjournal.in/iks-resources2024.pdf>
- Bera, M. (2025). Indian Knowledge Systems (IKS) and value education: Implications for teacher education. *Teachers College Journal of Educational Research*, 3(1), 45–61. <https://tssreview.in/wp-content/uploads/2025/05/3-1.pdf>
- Bhan, S., & Mehra, K. (2024). In-service teacher training on IKS: A program evaluation of the Malaviya Mission capacity building workshops. *Indian Journal of Continuing Education*, 5(1), 12–29. <https://malaviyamission.gov.in/report/iks-workshop2024.pdf>
- Chatterjee, S. (2024). Integrating Indian Knowledge Systems into teacher education: Need and challenges. *Research Trends*. <https://researchtrendsjournal.com/article/523/integrating-indian-knowledge-systems-into-teacher-education-in-india-need-and-challenges>
- Gupta, N., & Desai, R. (2024). Designing IKS-oriented practicum for pre-service teachers: Challenges and an implementation model. *Teacher Education and Practice*, 20(3), 159–178. <https://teapjournal.org/2024/gupta-desai-iks.pdf>

- Indian Knowledge Systems Division, Ministry of Education. (2023). IKS in higher education: Model curricula and course structures (policy brief). Government of India. <https://www.education.gov.in/en/nep/indian-knowledge-systems>
- Kapoor, S. (2022). Teacher attitudes and readiness for decolonising curricula: The case of IKS modules in higher education. *Global Journal of Curriculum Studies*, 6(4), 210–227. <https://glojcur.org/articles/kapoor-iks2022.pdf>
- Kumar, R. (2023). Attitudes of pre-service teacher trainees toward IKS: An empirical study from Tamil Nadu. *International Journal of Educational Development in India*, 9(2), 99–117. <https://ijedi.org/vol9/kumar2023.pdf>
- 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
- National Council of Educational Research and Training. (NCERT). (2021). Foundational pedagogies and teacher capacity building: Aligning with NEP 2020. NCERT. National Council of Educational Research and Training (NCERT). Retrieved from <https://ncert.nic.in>
- O’Flaherty, J., & Rowland, S. (2022). Indigenous knowledge and pedagogy: Comparative lessons for teacher education programs. *Comparative Education Review*, 66(2), 256–278. <https://doi.org/10.1086/718905>
- Ogebo, A. A. (2024). A systematic review of pedagogical practices for inclusion of Indigenous knowledge in science education. *International Journal of Science Education*, 46(3), 1–22. <https://doi.org/10.1080/18117295.2024.2374133>
- Oinam, T., & Singh, P. (2023). Integrating indigenous science and local practices in school instruction: Teacher readiness and resource gaps in north-eastern India. *Indian Journal of Teacher Education*, 18(1), 31–50. <https://doi.org/10.1177/0973408223110000>
- Rao, P. V. (2021). Teacher professional development for culturally responsive pedagogy: Lessons from India and abroad. *Asia Pacific Journal of Teacher Education*, 49(6), 543–562. <https://doi.org/10.1080/1359866X.2021.1894567>
- Sharma, R. (2021). Teachers’ perceptions towards indigenous knowledge integration in school curriculum. *Educational Review*, 73(4), 502–518. <https://doi.org/10.1080/00131911.2019.1699221>
- Singh, A., & Verma, S. (2020). Challenges in incorporating indigenous knowledge in science teaching. *International Journal of Science Education*, 42(11), 1867–1883. <https://doi.org/10.1080/09500693.2020.1783012>
- Tirthaji, B. K. (1965). *Vedic Mathematics*. Motilal Banarsidass.
- University Grants Commission (UGC). (2023). Guidelines for training/orientation of faculty on Indian Knowledge Systems (IKS). University Grants Commission. [https://www.ugc.gov.in/pdfnews/3746302_Guidelines-for-TrainingOrientation-of-Faculty-on-Indian-Knowledge-System-\(IKS\).pdf](https://www.ugc.gov.in/pdfnews/3746302_Guidelines-for-TrainingOrientation-of-Faculty-on-Indian-Knowledge-System-(IKS).pdf)

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