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Integration of Indian Knowledge Systems in Higher Education: A Critical Analysis of NEP 2020

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Abstract

The National Education Policy (NEP) 2020 has renewed attention to Indian Knowledge Systems (IKS) by advocating a more culturally grounded, multidisciplinary and research-oriented education system. Its promise, however, cannot be assessed simply by counting courses or celebrating selected historical achievements. This article critically examines the policy architecture for Indian Knowledge Systems in higher education, with particular attention to the relationship between curricular inclusion, epistemic plurality, academic rigour and social justice. Using a qualitative documentary and interpretive approach, it analyses NEP 2020, the University Grants Commission's 2023 guidelines on incorporating Indian knowledge in higher education curricula, faculty-orientation guidance and relevant scholarship. The analysis identifies significant opportunities: recovering neglected intellectual histories, strengthening Indian-language scholarship, connecting disciplinary learning with local contexts, and building research around knowledge traditions in areas such as mathematics, ecology, medicine, architecture, agriculture and the arts. At the same time, it highlights risks of tokenism, romanticisation, selective canon formation, weak evidentiary standards, inadequate faculty preparation and the marginalisation of communities whose knowledge is often transmitted orally. The article argues that meaningful integration requires neither uncritical revivalism nor wholesale rejection. It calls for a plural, evidence-sensitive and socially accountable approach in which inherited knowledge is studied historically, tested where empirical claims are made, debated across disciplines and developed in partnership with its knowledge holders.

Keywords: Indian Knowledge Systems; NEP 2020; higher education; epistemic pluralism; curriculum reform; indigenous knowledge; research and pedagogy.

1. Introduction

Higher education does more than transmit information. It determines which questions receive attention, whose intellectual work is remembered, what counts as evidence and which languages are treated as suitable for advanced thought. Indian university curricula have been shaped by colonial institutions, post-independence priorities and global disciplinary conventions. These influences enabled important developments, but also left many subcontinental and community-based traditions less visible. The renewed policy interest in IKS must be read against this background.

The National Education Policy 2020 presents an opportunity to reconsider the relationship between inherited knowledge and contemporary education. It links educational reform with holistic learning, multidisciplinary study, the promotion of Indian languages and cultures, and the strengthening of research.

It also refers directly to Indian, indigenous and tribal knowledge, including traditional practices of learning and community-based expertise (Ministry of Education [MoE], 2020). The University Grants Commission (UGC) subsequently issued guidelines to support the incorporation of Indian knowledge into undergraduate and postgraduate curricula (University Grants Commission [UGC], 2023b). These developments create an institutional basis for moving beyond the occasional mention of Indian contributions in textbooks.

Policy recognition does not by itself produce intellectual renewal. A course may carry an IKS label while presenting a narrow celebration of the past; equally, an appeal to scientific temper may overlook knowledge preserved outside formal laboratories. The issue is not simply whether Indian knowledge should enter higher education, but whose knowledge is represented, what standards of inquiry apply and what learning may emerge. IKS should expand the archive without lowering evidentiary standards or placing tradition beyond question.

The discussion proceeds through an analysis of the concept of IKS, the policy framework under NEP 2020 and UGC guidance, the educational possibilities of integration, and the tensions that may undermine its aims. It concludes with recommendations for curriculum design, research, teacher preparation and institutional accountability.

2. Understanding Indian Knowledge Systems: Plurality, Continuity and Change

The term Indian Knowledge Systems is best understood as an umbrella for a wide range of intellectual, practical, artistic and community traditions that have developed in the Indian subcontinent across different periods. These include formal philosophical schools, mathematical and astronomical works, medical traditions, linguistic scholarship, aesthetic theory, architecture, agricultural practice, craft knowledge, ecological observation, systems of governance and oral forms of learning. They are not all organised in the same way, nor do they share a single method or worldview. Some are preserved through written treatises and commentaries; others survive through apprenticeship, performance, memory, ritual, experimentation and everyday work. The UGC guidelines themselves describe IKS as including both systematised disciplines and practices developed and preserved by communities, including tribal communities (UGC, 2023b).

The word ‘system’ can unintentionally suggest a unified doctrine. Indian intellectual history instead contains debate, disagreement, borrowing and change. Nyāya, Buddhist logic, Jain thought, Vedānta, Sāṃkhya and other schools cannot be reduced to one position. Medical and astronomical practices developed through observation, textual debate and regional adaptation; knowledge also moved through trade, translation, courts, artisan networks and encounters with other societies. Sen (2005) foregrounds the argumentative character of Indian intellectual life, while Pollock (2006) demonstrates how Sanskrit literary and political cultures developed within historically specific institutions and networks. Ganeri (2011) further shows that philosophical inquiry continued to evolve in early modern India. Ganeri (2001) demonstrates the sophistication of classical Indian reasoning, while Dharampal (1983) draws attention to eighteenth-century scientific and technical practices that merit further archival study. These works support historical inquiry, not the assumption that every inherited claim is equally established.

A contemporary understanding of Indian Knowledge Systems should hold together three ideas. Knowledge has historical depth and must be located in the contexts in which it developed. It is socially distributed across scholars, artisans, farmers, healers, performers and communities. It is also open to scrutiny: historical respect does not remove the need to examine evidence, limitations, ethics and present-

day relevance. Higher education should study how traditions were produced, transmitted, contested and adapted, rather than freeze them as museum objects.

3. Method and Scope of the Analysis

This article uses qualitative, interpretive documentary analysis. It examines NEP 2020, the UGC's curriculum and faculty orientation guidelines (UGC, 2023b, 2023d), and selected historical, philosophical and critical scholarship on knowledge, social hierarchy and epistemic justice. It analyses the policy rationale and conditions for implementation; it does not report field data or measure IKS-course outcomes in particular universities. Its conclusions are therefore analytical and normative, identifying questions for institutional investigation rather than presenting nationwide empirical findings.

4. NEP 2020 and the Policy Architecture for IKS in Higher Education

NEP 2020 places Indian knowledge within a broader vision of educational transformation. Paragraph 4.27, in the school-education section, calls for 'Knowledge of India' to be incorporated accurately and scientifically. It includes tribal knowledge, indigenous traditions and traditional learning across mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, governance and conservation (MoE, 2020). Its location is significant: higher education has no equivalent consolidated IKS chapter. The university-level case must be assembled from connected policy commitments.

Chapter 11 advocates holistic and multidisciplinary higher education, drawing attention to traditions of learning across fields and challenging rigid separations between arts, sciences, vocational learning and professional study. Chapter 17 emphasises research and knowledge creation; Chapter 22 promotes Indian languages, arts, culture and manuscripts. NEP also identifies international opportunities in Indology, Indian languages, AYUSH systems, yoga, arts, music, history and culture (MoE, 2020). These provisions create space for Indian Knowledge Systems, but their effect depends on institutional translation into coherent programmes.

The UGC's 2023 curriculum guidelines provide a more operational framework. They encourage undergraduate and postgraduate students to take IKS credit courses amounting to at least five per cent of total mandated credits, with at least half of the IKS credits related to the student's major discipline. They also emphasise authentic sources—including source texts, historical accounts, inscriptions, material evidence and systematic records of present-day community practices—and ask course designers to consider continuity in Indian knowledge traditions and contemporary applications (University Grants Commission [UGC], 2023b). The UGC's separate guidance on courses based on Indian heritage and culture adds a modular course-development pathway for higher education institutions (UGC, 2023c). The discipline-linked requirement is particularly significant: it discourages the treatment of IKS as an isolated cultural subject and invites students to examine how a knowledge tradition relates to their own field.

The UGC has also issued guidance for faculty induction and refresher programmes to familiarise teachers with IKS and its classroom applications (UGC, 2023d). This recognises a practical difficulty: many university teachers lack the linguistic, historical or methodological preparation to interpret Sanskrit, Persian, Pali, Prakrit, Tamil or oral sources responsibly. Faculty development is therefore part of the academic infrastructure for credible implementation.

5. Educational Possibilities of Meaningful Integration

Expanding the knowledge archive and strengthening epistemic plurality. IKS can broaden what universities regard as worthy of study. Mathematics students may examine numeration, algebra, geometry and astronomical computation; linguistics students may place Pāṇinian grammar in dialogue with other linguistic theories; architecture and engineering students may investigate historical construction, water systems, materials and craft. The purpose is not to claim that one tradition anticipated every modern discovery, but to reconstruct ideas, methods and intellectual exchange. Such work broadens the archive and gives students a more complex account of knowledge development. Historical studies of classical medical writings also show why source criticism and context must precede comparisons with modern biomedicine (Wujastyk, 2003).

This expansion should be framed as epistemic plurality, not civilisational competition. The aim is not to replace global traditions with an Indian canon, but to compare how different traditions ask questions, organise evidence and explain the world. Indian debates about perception, inference, testimony and valid knowledge can, for example, be studied alongside modern epistemology. Matilal's (1986) reconstruction of classical Indian theories of perception provides a rigorous basis for such comparison. Comparison reveals both points of contact and genuine disagreement; it develops intellectual independence more effectively than claims of inherited superiority.

Reconnecting disciplines with lived environments. Applied study may connect local water harvesting, seed selection, soil and medicinal-plant knowledge, textiles, food preservation and ecology with present-day questions. Environmental science students could document seasonal indicators used by farmers and test their reliability under changing rainfall, soil and land-use conditions. Engineering students could examine historical water structures through materials, climate, labour and local institutions. The educational value lies in joining historical understanding with contemporary measurement. Living heritage also depends on community participation and intergenerational transmission (UNESCO, 2003).

Broadening pedagogy and forms of assessment. Because many traditions are taught through demonstration, apprenticeship, dialogue, observation and practice, their study can use field documentation, oral histories, manuscript reading, craft workshops, laboratory reconstruction and community projects. These approaches require clear learning outcomes and ethical safeguards. Assessment should test students' ability to identify sources, evaluate claims, explain context and communicate reasoned conclusions rather than repeat praise. UGC's artist- and artisan-in-residence guidelines offer a way to include experienced practitioners in teaching, mentoring and research (UGC, 2023a).

Supporting multilingual scholarship. Knowledge becomes inaccessible when advanced learning is confined to a small number of languages or when translation strips concepts of their context. NEP 2020's emphasis on Indian languages, and the UGC's acceptance of Indian-language media for IKS courses, can support more inclusive scholarship (MoE, 2020; UGC, 2023b). The UGC's guidelines for translation of books into Indian languages further recognise translation as an institutional task within higher education (UGC, 2023e). Universities can develop bilingual teaching materials, glossaries, annotated translations and digital repositories. This work should not assume that every technical term has a simple equivalent in English. Transliteration, explanation and discussion of conceptual differences may be necessary. Strong multilingual resources can improve access while also enabling international scholars to engage with primary material.

Creating new research questions. The most productive integration will not stop at preservation. It can generate research on the history of scientific instruments, manuscript transmission, regional medical practices, ecological knowledge, mathematics education, music theory, materials, linguistics and community-based innovation. The question is not merely what earlier thinkers knew, but how their methods operated, how reliable their results were, how knowledge moved between regions and what can be learned today. This approach is consistent with NEP 2020's emphasis on research across disciplines and with the UGC's call for systematic study of IKS (MoE, 2020; UGC, 2023b).

6. Critical Issues and Risks in Implementation

The danger of a narrow or fixed canon. The first challenge is definitional. If IKS is presented primarily through a small selection of ancient texts, celebrated personalities or Sanskritic traditions, its stated breadth may be lost. The histories of Adivasi and other local communities, regional languages, women practitioners, artisans, farmers, Sufi and Bhakti traditions, Buddhist and Jain scholarship, and knowledge developed through trade and cross-cultural exchange may remain peripheral. A recent critical intervention by Dey and Sen (2026) argues that the category can be made monolithic and exclusionary when the diversity of India's knowledge histories is narrowed to a selective canon. Their argument should be read as a scholarly critique to be examined, not as a substitute for evidence about every institutional initiative. It nevertheless raises a necessary question for curriculum committees: who is being represented, who is missing and who has the authority to decide?

This concern is also a matter of social history. Knowledge is produced within institutions and power relations. Access to literacy, manuscript preservation and formal learning has not been equal. Research on caste and gender shows how hierarchy shapes labour, status and control over knowledge (Chakravarti, 2003; Rege, 2006). Celebrating inherited traditions without asking who could learn, teach, write or transmit them may reproduce exclusions. The answer is to study intellectual achievements and social conditions together, not to dismiss an entire tradition. These omissions can also constitute epistemic injustice, when social power shapes whose testimony is trusted and whose experience can be understood (Fricker, 2007). Critical scholarship on epistemicide and decolonising research further warns that knowledge production can silence or appropriate the intellectual work of subordinated communities unless research practices are made answerable to them (Santos, 2014; Smith, 2021).

Distinguishing evidence from assertion. The second challenge concerns the relationship between historical respect and scientific validation. A traditional practice may contain careful observation and practical insight, but a claim about its effectiveness must still be tested using methods appropriate to the question. Historical evidence can establish that a practice existed; it cannot, by itself, prove that every explanation attached to it is empirically correct. Likewise, a philosophical or spiritual proposition should be studied on its own terms rather than presented as a laboratory finding. Universities need to distinguish textual interpretation, historical reconstruction, practitioner testimony, experimental evidence and metaphysical argument. Without these distinctions, the integration of IKS may become vulnerable to exaggerated claims, selective quotation or the presentation of myth as empirical fact.

Scientific scrutiny must be applied fairly. It should not dismiss local practices merely because they are not expressed in modern scientific language. Oral testimony, long-term observation and community experience can generate hypotheses and identify neglected phenomena. They are valuable starting points, though not substitutes for controlled testing when causal or clinical claims are made. Rigour means respecting the source while asking what evidence could support, qualify or disconfirm the claim.

Avoiding tokenism and curricular overload. A credit percentage can provide visibility, but it can also encourage superficial compliance. Institutions under pressure to meet credit requirements may introduce general survey courses with limited disciplinary relevance, rely on poorly prepared teaching material or assess students through memorisation. If IKS is treated as an additional requirement without removing duplication elsewhere, it may also add to student workload without improving learning. The UGC's recommendation that at least half of IKS credits relate to the major discipline offers a useful safeguard, but institutions must implement it through meaningful course design rather than mechanical credit allocation (UGC, 2023b).

Capacity, language and resource constraints. Serious engagement with historical sources requires libraries, cataloguing, manuscript conservation, reliable editions, translation, digital access and scholars who can work across disciplines and languages. Many colleges do not have these resources. Faculty members may be interested but lack the time or training to design accurate content. Community experts may possess extensive knowledge but not hold formal academic credentials; universities need fair mechanisms to recognise and remunerate their contribution. If resources remain concentrated in a few well-funded institutions, IKS integration may deepen rather than reduce inequalities across the higher-education system.

Ownership, consent and the ethics of knowledge extraction. Community knowledge is not raw material for unrestricted academic publication or commercial innovation: documentation may expose confidential practices, sacred sites, medicinal resources or livelihood techniques. Universities should obtain informed consent, clarify attribution and data ownership, respect community protocols and agree on benefit-sharing where research leads to commercial or policy applications. The UNESCO Convention affirms community participation in safeguarding living heritage (UNESCO, 2003), while the UN Declaration recognises Indigenous peoples' rights to control and protect traditional knowledge (United Nations General Assembly, 2007). Research should also make transparent who sets questions and who benefits (Smith, 2021).

Institutional autonomy and academic freedom. Finally, implementation must protect scholarly disagreement. No single administrative body can settle the historical, philosophical or scientific status of every knowledge claim. Universities need transparent peer review, diverse expert committees and freedom to publish findings that are supportive, critical or inconclusive. The credibility of IKS research will depend on whether institutions permit questions that challenge established narratives as readily as they support research that recovers neglected achievements.

7. A Framework for Responsible and Rigorous Integration

Adopt a plural and historically grounded curriculum. Universities should map knowledge traditions by discipline, region, language and community, including textual and oral sources, intellectual schools, craft practices and intercultural exchange. Each course outline should identify the period, geography, source base and social context of its material. This prevents "Indian" from becoming a synonym for one language, religion or historical period, and recognises traditions as changing rather than fixed.

Make provenance and evidence visible. Students should learn to identify a claim's origin and available evidence: manuscripts, archaeological material, oral testimony, historical interpretation, philosophical argument or experimental results. These categories show what a source can establish; they are not a simple hierarchy. Measurable claims about health, engineering or environmental impact require suitable validation, while historical and philosophical study requires accurate sources, context and sound argument.

Connect IKS with disciplinary learning. The UGC recommendation that half of IKS credits relate to the major discipline should lead to specific pathways (UGC, 2023b). Mathematics students might compare historical methods; education students could study teaching and apprenticeship; environmental studies students could examine local land and water knowledge; language students could study grammar and poetics; and design students could investigate craft and architecture. The aim is disciplinary connection, not decoration.

Build faculty capacity through collaborative teaching. Institutions can establish fellowships, interdisciplinary teaching teams, source-reading groups, translation projects and partnerships with subject experts. A historian, linguist, scientist and practitioner may need to co-design a course. UGC's faculty guidance is a starting point; training should be evaluated through teaching quality and student inquiry, not workshop counts alone (UGC, 2023d).

Establish equitable community partnerships. Local knowledge holders should be collaborators, not merely informants. Universities need protocols for consent, acknowledgement, compensation, confidentiality, data storage and returning findings to communities. Community representatives should help decide what may be documented or taught. Where knowledge is collectively held, relevant community protocols must be respected alongside individual consent.

Protect inclusion and academic freedom. Curriculum review should examine representation across caste, gender, region, religion, language, disability and indigenous identity. The objective is not identical representation in every course, but visibility of omissions and inherited inequalities. Students must be able to question claims without being judged culturally disloyal. Tradition is studied most rigorously when debate, comparison and revision are possible.

Evaluate learning and research outcomes. Institutions should assess whether IKS improves source interpretation, comparison, evidence-based reasoning, contextual understanding and application to contemporary problems. Indicators may include student research, community partnerships, translations, interdisciplinary publications and documented use of findings. Credit completion alone is inadequate. External review by scholars and community knowledge holders can identify gaps and discourage ceremonial implementation.

8. Conclusion

NEP 2020 has opened policy space for IKS in a higher-education environment that has often privileged narrow disciplinary and linguistic pathways. UGC guidelines give this ambition curricular direction through credit recommendations, discipline-linked courses, source-based study and faculty orientation. These steps can recover neglected histories, enrich interdisciplinary learning and connect universities with the intellectual resources of surrounding communities.

The success of this agenda will depend less on IKS appearing in course titles than on the standards governing its study. A credible approach recognises traditions as plural, historically changing and socially situated. It examines achievement and exclusion, distinguishes empirical evidence from historical or philosophical claims and protects the right to question inherited ideas. The choice is not between celebration and rejection, but between superficial inclusion and responsible scholarship. With careful source work, scientific openness, multilingual access, community partnership and academic freedom, IKS can become a living field of inquiry that expands both the questions universities ask and the voices they hear.

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