

# IKS (INDIAN KNOWLEDGE SYSTEMS) IN TEACHER EDUCATION INCLUDING VISUAL AND PERFORMING ARTS

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## ABSTRACT

Indian Knowledge Systems (IKS), rooted in India's civilizational heritage, offer a vast corpus of intellectual, artistic, scientific, and pedagogical traditions. With India's National Education Policy (NEP) 2020 affirming the integration of IKS across all levels of education, teacher education programs have a critical responsibility to equip future educators with frameworks that draw from both indigenous epistemologies and contemporary disciplinary knowledge. This paper explores the role of IKS in teacher education, with a special emphasis on visual and performing arts such as music, dance, theatre, storytelling, and traditional crafts. The study examines the conceptual foundation of IKS, its pedagogical value, the challenges of integrating arts-based IKS content, and the transformative potential of such integration for holistic learning. The paper concludes by proposing a practical model for embedding IKS within teacher education curricula and highlights the need for research, policy support, and teacher capacity-building.

**Key Characteristics of IKS:** Holistic Worldview: IKS does not separate disciplines sharply but views knowledge as interconnected. Arts, science, spirituality, and daily life are intertwined.

## 1. INTRODUCTION

India possesses one of the world's oldest continuous civilizations, marked by sophisticated systems of philosophy, science, arts, mathematics, linguistics, healthcare, and environmental stewardship (Rao, 2022). These intellectual traditions, collectively referred to as Indian Knowledge Systems (IKS), are not merely historical artifacts but dynamic frameworks of understanding human experience and knowledge creation. Educational reforms in India, particularly the NEP 2020, have emphasized the revitalization of IKS within curricula to foster cultural pride, global competence, and holistic development (Ministry of Education, 2020).

Teacher education is central to this mission. Teachers not only transmit knowledge but also serve as cultural mediators, interpreters, and innovators. Integrating IKS into teacher education ensures that future educators appreciate India's epistemological diversity and are prepared to incorporate it meaningfully into classroom practice. Visual and performing arts—comprising classical and folk music, dance, theatre, painting, sculpture, crafts, and storytelling—are crucial components of IKS, serving as both cultural repositories and pedagogical tools. Understanding their educational significance can transform teaching and learning into more experiential, culturally grounded, and inclusive processes.

This paper investigates the integration of IKS in teacher education with special focus on visual and performing arts. It reviews the conceptual foundations of IKS, outlines its pedagogical advantages, examines implementation challenges, and proposes curriculum and instructional models supportive of IKS-based arts integration.

## 2. CONCEPTUAL FOUNDATIONS OF INDIAN KNOWLEDGE SYSTEMS

Indian Knowledge Systems encompass wide-ranging intellectual and artistic developments—from Vedic and classical traditions to regional folk practices. IKS represents philosophical thought (e.g., Nyaya, Yoga, Vedanta), language sciences (Paninian linguistics), systems of medicine (Ayurveda, Siddha, Unani), astronomy (Jyotisha), mathematics (e.g., place-value notation), environmental ethics, social organization, and artistic practices (Ranganathan, 2019). It is characterized by interdisciplinarity, experiential learning, and a holistic approach to life.

**Key Characteristics of IKS: Holistic Worldview:** IKS does not separate disciplines sharply but views knowledge as interconnected. Arts, science, spirituality, and daily life are intertwined.

**Experiential and Embodied Learning:** Gurukula traditions and arts training systems (e.g., nattuvangam in Bharatanatyam, guru-shishya parampara in Hindustani music) emphasize learning through practice and lived experience.

**Ethical and Value-Laden:** Concepts such as dharma (duty/ethics), loka-sangraha (welfare of society), and ahimsa (non-harm) guide educational practices.

**Cultural Contextualization:** Knowledge is rooted in geography, community, ecology, and collective memory.

These features align with contemporary pedagogical discourses advocating integrated learning, socio-emotional education, and cultural relevance (Nussbaum, 2011).

## 3. THE ROLE OF TEACHER EDUCATION IN REVITALIZING IKS

Teacher education functions as the bridge between policy aspirations and classroom realities. Preparing teachers to integrate IKS requires transformation at three levels: knowledge acquisition, pedagogical adaptation, and cultural sensitivity.

Teacher education serves as the vital link between high-level policy aspirations, such as those outlined in NEP 2020, and the practical realities of the classroom. To effectively revitalize Indian Knowledge Systems (IKS), teacher preparation must undergo a comprehensive transformation across three interconnected levels: knowledge acquisition, pedagogical adaptation, and cultural sensitivity. At the level of **knowledge acquisition**, educators must move beyond superficial understanding to deeply engage with diverse IKS domains—ranging from linguistic heritage and traditional arts to indigenous environmental ethics—by interacting with authentic sources like practitioners, museums, and community workshops. Pedagogical adaptation then translates this knowledge into action, encouraging teachers to move away from rigid instruction toward more fluid, embodied methods such as storytelling, environmental learning, and interdisciplinary linkages, such as applying classical geometry to the art of Kolam or Rangoli. Finally, fostering cultural sensitivity and inclusivity ensures that teachers respect the vast plurality of India's traditions—including tribal, folk, and regional systems—thereby preventing cultural homogenization and ensuring that IKS-based education is inclusive and representative of all community identities.

## 4. VISUAL AND PERFORMING ARTS WITHIN IKS

In Indian epistemology, the arts are far more than mere forms of entertainment; they represent sophisticated, systematic bodies of knowledge that integrate aesthetics, mathematics, physics, ethics, and psychology. Foundational texts such as the *Natyashastra*, *Silpa Shashtra*, and *Sangita Ratnakara* provide a rigorous framework for these traditions, illustrating that artistic practice is a deliberate intellectual and spiritual pursuit (Vatsyayan, 1997). This structured

approach to the arts allows them to function as both cultural repositories and pedagogical instruments that nurture a student's cognitive and emotional faculties.

The auditory and kinesthetic dimensions of IKS, specifically music (*Sangita*) and dance (*Nritya/Natya*), offer unique educational benefits. Indian music—encompassing both Hindustani and Carnatic traditions—is characterized by mathematical precision in its *tala* (rhythmic) cycles and deep emotional resonance through *rasa*. These practices cultivate intense concentration and discipline. Similarly, classical dance forms like Bharatanatyam and Kathak, alongside vibrant folk traditions like Garba and Bihu, synthesize physical geometry with rhythmic storytelling. These forms serve as an embodied pedagogy, where the learner achieves a holistic understanding of rhythm, space, and community collaboration.

Furthermore, the visual and narrative arts within IKS provide powerful tools for interdisciplinary learning and moral development. Theatre (*Natya*) and storytelling traditions, such as *Katha* and *Pandavani*, utilize symbolic gestures (*mudras*) and social commentary to enhance empathy and communication skills. Simultaneously, visual arts—including painting traditions like Madhubani, architectural designs, and geometric arts like Kolam—embody complex scientific and aesthetic principles. By integrating these visual and performing arts into teacher education, IKS provides a multifaceted approach to learning that addresses the spiritual, intellectual, and social dimensions of the human experience.

## 5. PEDAGOGICAL VALUE OF INTEGRATING IKS-BASED ARTS IN TEACHER EDUCATION

The integration of Indian Knowledge Systems (IKS) through visual and performing arts into teacher education offers profound pedagogical value, serving as a catalyst for a more comprehensive and humane approach to schooling. At its core, this integration facilitates holistic development by simultaneously engaging the cognitive, affective, and psychomotor domains. Unlike traditional, lecture-heavy methods, arts-based IKS encourages students to use their minds, bodies, and emotions in unison, thereby enhancing creativity, cultural intelligence, and aesthetic literacy. When future teachers are trained in these methods, they move beyond the transmission of facts and instead nurture well-rounded individuals capable of complex collaboration and emotional regulation.

This approach is fundamentally rooted in experiential learning, aligning seamlessly with contemporary constructivist theories that prioritize "learning by doing." By participating in folk art workshops, Hindustani or Carnatic music sessions, and traditional theatre exercises, teacher trainees move from abstract theory to embodied knowledge. This hands-on engagement ensures that pedagogical concepts are not just memorized but felt and lived, making the subsequent teaching process more authentic and impactful. Furthermore, IKS-based arts serve as a powerful vehicle for inclusive and multicultural pedagogy. In a nation as diverse as India, the arts provide a platform to represent the vast plurality of regional, tribal, and folk traditions. By bringing these voices into the mainstream curriculum, teacher education programs can dismantle cultural hierarchies and foster a classroom environment where every student's heritage is recognized and celebrated.

Moreover, the analytical depth required to engage with IKS significantly enhances critical thinking. When a trainee teacher analyzes the complex mathematical patterns in a *tala* (rhythm cycle), the sophisticated geometry within *Warli* or *Kolam* art, or the intricate symbolism in classical dance *mudras*, they develop high-level cognitive skills. This intellectual engagement encourages educators to look at the historical evolution of art forms through a critical lens, bridging the gap between ancient tradition and modern innovation. Finally, the role of IKS in Socio-Emotional Learning (SEL) cannot be overstated. As noted by

Goleman (2006), the ability to regulate emotions and cultivate empathy is vital for social success. The performing arts—music, dance, and drama—require a deep sense of self-awareness and interpersonal synchronization. Teachers trained in these disciplines are better equipped to manage classroom dynamics, build empathetic relationships with students, and create a supportive emotional atmosphere. Ultimately, embedding IKS-based arts into teacher education transforms the act of teaching from a clinical delivery of content into a soul-enriching, culturally grounded, and intellectually stimulating journey that prepares both teachers and students for the complexities of the 21st century

## **6. IKS IN NEP 2020 AND IMPLICATIONS FOR TEACHER EDUCATION**

The National Education Policy (NEP) 2020 marks a landmark shift in Indian academics by advocating for the systematic integration of Indian Knowledge Systems (IKS) across all curricular levels, with a profound emphasis on traditional arts and indigenous wisdom. For teacher education, this policy serves as a mandate for structural reform, requiring B.Ed. and M.Ed. programs to move beyond Western-centric models and embrace interdisciplinary, culturally rooted frameworks. The implications are far-reaching: institutions are now expected to design experiential modules that utilize music, dance, and theatre as active pedagogical tools rather than mere extracurricular activities. Furthermore, the policy encourages colleges of education to form strategic partnerships with local artisans and cultural institutions, transforming the community into a living classroom. By promoting rigorous research on IKS-based pedagogies and offering specialized electives in heritage and cultural studies, teacher education aims to produce a new generation of "cultural ambassadors." These educators will be equipped to manage 21st-century classrooms that are deeply anchored in local identity while remaining globally competitive. Ultimately, NEP 2020 positions IKS not as a relic of the past, but as a dynamic necessity for fostering holistic development and national pride in future learners (Ministry of Education, 2020). Challenges of Integrating IKS in Teacher Education

Integrating Indian Knowledge Systems (IKS) into teacher education faces several significant systemic hurdles that must be addressed to ensure successful implementation. A primary concern is the lack of teacher preparedness, as many educators feel unqualified to teach classical or folk arts due to a lack of formal training or personal exposure. This is compounded by curriculum overload, where existing B.Ed. and M.Ed. programs are already so credit-heavy that adding new IKS modules feels like a burden without radical restructuring. Furthermore, standardization issues arise from India's immense cultural diversity; creating a uniform curriculum that fairly represents various regional, tribal, and classical traditions without oversimplifying them is a complex task.

Beyond the curriculum, resource constraints pose a physical barrier, as many institutions lack the dedicated studio spaces, musical instruments, or funding to hire traditional art practitioners. Finally, deep-seated academic biases continue to persist; decades of Western-centric education have marginalized indigenous epistemologies, leading some to view IKS with skepticism regarding its academic rigor (Sharma, 2021). Overcoming these obstacles is not merely about adding content, but requires a holistic effort involving systemic reforms, increased financial investment, and a fundamental shift in pedagogical mindset to validate IKS as a credible and necessary academic discipline.

## **7. PRACTICAL STRATEGIES FOR INTEGRATING IKS IN TEACHER EDUCATION**

### **1. Curriculum Framework**

A structured curriculum may include:

- a) Core Courses: Foundations of IKS, Indian philosophy of education.
- b) Arts Modules: Music, dance, theatre, visual arts, crafts.
- c) Practitioners' Workshops: Sessions led by musicians, dancers, artisans.
- d) Field Immersions: Visits to cultural institutions, museums, gurukulas.
- e) Action Research: Classroom-based research on implementing IKS pedagogies.
- f) Community Projects: Working with local folk artists and cultural groups.

## **2. Methodology Courses Using Arts-Based IKS**

- Teaching mathematics through Kolam, Warli art geometry.
- Environmental studies through tribal ecological practices.
- Language education through storytelling traditions.
- History through folk theatre and musical narratives.

## **3. Collaborative Learning Models**

Teacher trainees can engage in:

- a) peer teaching of arts-based lessons,
- b) interdisciplinary projects combining science and arts (e.g., acoustics of Indian instruments),
- c) Reflective journals documenting IKS experiences.

## **4. Blended Learning Approaches**

Digital platforms can support:

- virtual museum tours,
- multimedia lessons on classical music/dance,
- Online archives of IKS.

## **5. Partnerships and Institutional Support**

Colleges of education can collaborate with:

- Sangeet Natak Akademi,
- National School of Drama,
- Lalit Kala Akademi,
- IGNCA,
- local cultural centers.
- Partnerships ensure access to expertise and authentic learning experiences.

The transformative potential of IKS-based arts education lies in its ability to bridge ancient wisdom with modern instructional needs, fostering a paradigm shift in how knowledge is delivered and received. By integrating these systems into teacher education, declining cultural traditions undergo a process of cultural revitalization, as educators make traditional art forms vibrant and relevant for contemporary youth. This integration sparks pedagogical innovation by moving beyond the limitations of rote memorization toward creative,



experiential methods. Furthermore, it allows for the strengthening of national identity; teachers can cultivate a sense of rootedness in students while simultaneously preparing them for global competence. On a social level, this approach encourages deep community engagement through partnerships between schools and local artisans, which enhances social cohesion. Finally, the focus on traditional crafts and indigenous ecological knowledge aligns with a sustainable development orientation, teaching students to value environmental stewardship and sustainable lifestyles. Ultimately, this holistic model produces future-ready educators who view cultural heritage not as a relic of the past, but as a dynamic tool for building an inclusive and sustainable future.

## 8. A PROPOSED MODEL FOR CURRICULUM INTEGRATION

To systematically implement these benefits, a four-tier curricular framework is recommended for teacher education programs:

- **Foundation Courses:** These establish a theoretical base, covering the *Introduction to IKS*, *Indian Aesthetics and Philosophy*, and the *History of Indian Arts* to provide historical and philosophical context.
- **Pedagogy Courses:** These focus on practical classroom application, such as *Teaching Through Visual Arts*, *Music and Movement in Education*, and the use of *Theatre in Pedagogy*.
- **Experiential Modules:** This tier emphasizes active learning through *field visits*, *hands-on workshops* with master artisans, *artist interactions*, and *micro-teaching* sessions that utilize IKS-based arts.
- **Research and Community Engagement:** The final tier ensures long-term impact through *action research projects*, *community cultural documentation*, and *school internships* where trainees implement and refine IKS-based lessons in real-world settings.

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## 9. A PROPOSED MODEL FOR CURRICULUM INTEGRATION

To systematically integrate Indian Knowledge Systems into teacher education, a robust four-tier curricular framework is proposed to ensure that future educators move from theoretical understanding to practical mastery. The model begins with Foundation Courses, which establish a necessary intellectual base by exploring the history of Indian arts, aesthetics, and the philosophical underpinnings of IKS. Once the conceptual groundwork is laid, the

framework transitions into Pedagogy Courses, where the focus shifts to practical application; here, trainees learn to use music, movement, theatre, and visual arts as primary instructional tools across various subjects.

The third tier consists of Experiential Modules, moving beyond the classroom to engage in active, "hands-on" learning. This involves direct interactions with master artisans, field visits to heritage sites, and micro-teaching sessions that allow trainees to practice IKS-based methods in a controlled environment. Finally, the model culminates in Research and Community Engagement, ensuring long-term sustainability. Through action research and school internships, trainees document local traditions and implement refined IKS lessons in real-world settings. This comprehensive model ensures that teacher training is not just informative but transformative, bridging the gap between ancient wisdom and contemporary classroom practice through a blend of theory, experience, and community-rooted research.

## 10. CONCLUSION

Indian Knowledge Systems represent a vibrant, holistic, and interdisciplinary framework deeply relevant to contemporary education. Integrating IKS into teacher education, especially through visual and performing arts, enriches pedagogical practices and promotes cultural literacy, creativity, and socio-emotional development. While challenges exist—ranging from curriculum overload to limited teacher preparedness—the potential benefits far outweigh the difficulties. By embedding IKS systematically within teacher education programs, India can cultivate educators who are culturally grounded, innovative, and responsive to diverse learner needs. Sustainable integration requires institutional commitment, policy support, and collaboration with cultural practitioners. Ultimately, IKS-based arts education nurtures teachers capable of transforming classrooms into spaces of joy, creativity, inclusivity, and cultural continuity.

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