

Bridging Tradition and Innovation: The Role of Indian Knowledge Systems in Reimagining Education Today for Gen Z Learners

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ABSTRACT

As the world undergoes rapid transformation through technology, globalization, and shifting values, education for Generation Z (born roughly mid-1990s through early 2010s) faces the challenge of remaining relevant, meaningful, and culturally rooted. Indian Knowledge Systems (IKS) offer a rich repository of philosophical, pedagogical, scientific, and ethical traditions that can inform a reimagined educational paradigm. This paper explores how IKS can be integrated with modern educational innovation to engage Gen Z learners more deeply, promote holistic development and foster values such as sustainability, community, and ethical leadership. The paper reviews relevant literature on IKS, Gen Z learning styles and pedagogy, analyses case studies and models and proposes frameworks for incorporating IKS in curricula, teacher training and educational technology. It concludes with implications, challenges, and recommendations for policy and practice.

Keywords: Indian Knowledge Systems, Gen Z learners, education innovation, holistic education, pedagogy, values education, sustainability, indigenous wisdom

INTRODUCTION

In the 21st century, the pace of change in society driven by digital technologies, environmental crises, social fragmentation and cultural globalization poses new challenges for education. Generation Z, often described as “digital natives,” has grown up in an environment saturated with information, fast communication, and global cultural flows. While these learners are adept with technology, they often report challenges such as lack of purpose, anxiety, disconnection from community and nature, and difficulties in critical thinking and ethical grounding. Traditional models of education, which emphasize rote learning, compartmentalization of subjects, and narrow metrics of success, struggle to respond to these multifaceted needs.

Indian Knowledge Systems (IKS), encompassing millennia of indigenous thought, philosophy, art, science, and social practices, offer compelling resources for reimagining education. IKS includes but is not limited to Vedic literature, Buddhist and Jain philosophical traditions, Ayurvedic science, traditional ecological knowledge, folk arts and crafts, yoga, and ethical frameworks. These systems have been historically marginalized in mainstream education in favor of colonial inheritances and Western paradigms; yet they carry potential for holistic education: integrating mind, body, and spirit; connecting knowledge with values; emphasizing interdependence, ecology, community; fostering inquiry, intuition, and creativity.

For Gen Z learners, the fusion of tradition and innovation may offer an educational experience that is not only relevant and engaging but also grounding, ethical, and sustainable. The challenge is how to bridge IKS and contemporary educational innovation: What pedagogies, frameworks, technologies, and institutional policies are needed? What are the benefits? What obstacles must be addressed?

In this paper, I argue that integrating IKS with innovation in education can lead to more holistic, resilient and

values-oriented learners and societies. The paper proceeds by reviewing literature on Gen Z learning, Indian Knowledge Systems and successful models of integration; then analysing potential frameworks and case studies and concluding with recommendations and implications.

Focus of the Paper

- To understand the characteristics, learning preferences and needs of Generation Z in India and globally.
- To map the major components of Indian Knowledge Systems like philosophical, ethical, scientific, artistic and experiential and how they relate to contemporary education.
- To analyse how IKS can be integrated innovatively into curricula, pedagogy, technology and policy to make education more holistic, context-sensitive, values-oriented, and motivating for Gen Z.
- To identify challenges in integrating IKS with modern education and propose concrete recommendations for educators, institutions, and policymakers.

LITERATURE REVIEW

The educational needs of Generation Z have been the focus of considerable research over the past decade. Born between the mid-1990s and early 2010s, Gen Z students are characterized by their digital nativity, short attention spans, desire for immediacy, and an expectation for personalization in their learning experiences **(Seemiller & Grace, 2016)**. They are highly visual, prefer interactive and multimedia learning, and are drawn to environments that allow flexibility and creative expression. However, despite their digital fluency, many Gen Z learners experience a sense of disconnection from cultural roots, heightened levels of anxiety, and a desire for more purposeful and values-oriented education **(Turner, 2015)**. **Schroth (2019)** highlights that Gen Z learners gravitate toward learning environments that are collaborative, authentic, and socially relevant, valuing education that helps them address real-world problems like climate change and inequality. **Fromm and Read (2018)** add that this generation seeks meaningful engagement and a strong alignment with ethical, sustainable, and socially conscious values.

In contrast to the fast-paced, often fragmented learning models of today, Indian Knowledge Systems (IKS) represent a holistic, integrated approach to knowledge and education. IKS encompasses a broad spectrum of traditional knowledge from India, including philosophy, health sciences like Ayurveda, mathematics, astronomy, ecological wisdom, arts, architecture, yoga, and spirituality **(Ranganathan, 2020)**. Rooted in experiential learning, oral traditions, and mentorship models such as the guru-shishya Parampara, IKS emphasizes interconnectedness between disciplines, ethics, and the learner's environment **(Patwardhan, 2005)**. Philosophical traditions such as Vedanta, Sankhya, Nyaya, and Buddhist logic offer not only epistemological depth but also frameworks for ethics, inquiry, and self-realization **(Mitra, 2017)**. The integration of body, mind and spirit exemplified through practices like yoga and meditation shows a deep understanding of human psychology and well-being, which aligns with the growing need for social-emotional learning in today's education systems.

Studies from other global contexts support the integration of indigenous knowledge into mainstream education. In New Zealand, for instance, the integration of Māori knowledge into schools has led to improved student engagement, stronger community ties and a greater sense of identity among learners **(Smith, 1999)**. Similarly, in Canada, First Nations communities have reported positive outcomes from educational models that incorporate traditional ecological knowledge and spiritual teachings alongside Western curricula **(Battiste, 2002)**. These international examples indicate that indigenous knowledge systems, when integrated respectfully and meaningfully, can enhance learning outcomes, foster cultural pride and develop holistic learners.

In India, efforts to incorporate IKS into education have gained momentum in recent years, particularly through the **National Education Policy (NEP) 2020**, which emphasizes the importance of cultural rootedness and the integration of traditional knowledge **(Government of India, 2020)**. The **National Council of Educational Research and Training (NCERT)** has taken initiatives to include folk tales, local arts, and ecological

practices in textbooks, aiming to contextualize learning and promote regional diversity (NCERT, 2018). Additionally, schools across India have begun integrating yoga, mindfulness, and traditional music into their routines, noting improvements in students' focus, behaviour and mental health (Rao, 2019).

Nonetheless, the integration of IKS into modern education presents several challenges. Patwardhan (2005) notes that while there is immense potential in IKS, many teachers lack the training and resources to effectively incorporate it into their classrooms. Furthermore, much of IKS remains orally transmitted or written in classical languages like Sanskrit, making accessibility a significant issue (Joshi, 2016). There is also a concern about superficial or tokenistic inclusion, which can dilute the depth and context of traditional knowledge. Roy (2021) argues that for IKS to have a meaningful impact, educational institutions must prioritize community engagement, contextual learning, and authentic representation of cultural practices.

The literature indicates a growing recognition of the relevance of Indian Knowledge Systems in addressing the limitations of modern education for Gen Z learners. The alignment between Gen Z's desire for ethical, experiential, and meaningful education and the principles embedded in IKS creates a compelling case for integration. However, successful implementation will require thoughtful curriculum design, teacher training, policy support, and a commitment to cultural sensitivity.

Why IKS is Particularly Relevant for Gen Z

1. **Search for Identity and Roots** Many Gen Z learners, especially in India but also among Indian diaspora, feel a gap between global culture (media, technology) and their own local traditions. IKS provides a way to connect, feel rooted, and yet be globally engaged. Embedding local stories, philosophy, music etc., gives students pride, self-esteem, and identity.
2. **Need for Ethical, Value-Based Education** Ethical dilemmas (climate change, inequality, social fragmentation) are central issues for Gen Z. Traditional Indian systems emphasize values—dharma, ahimsa (non-violence), satya (truth), seva (service), community welfare—that can ground learners ethically. Modern curricula often treat values as optional or extracurricular; IKS can integrate them into core learning.
3. **Holistic Development and Well-being** Mental health is a big concern with Gen Z. High rates of anxiety, depression, burnout are reported. Practices like yoga, meditation, contemplative philosophies from IKS can help build emotional regulation, mindfulness, resilience. Also, physical-mental integration through arts, dance, nature.
4. **Sustainability and Ecological Awareness** Many IKS traditions are built around local ecology, conservation, respect for nature. With environmental crises, Gen Z is very concerned about sustainability. Incorporating IKS ecological wisdom offers both content (learning about sustainable agricultural practices, biodiversity) and ethics (living modestly, respecting nature).
5. **Learning Styles & Engaging Pedagogies** IKS often uses storytelling, oral tradition, apprenticeship, learning by doing, mentor-disciple models, observation, experiential learning. These align well with Gen Z's preference for interactive, practical, experiential modes rather than rote learning.

Challenges in Integrating IKS with Modern Education

While the benefits are substantial, integration is not without challenges:

- **Standardization vs. Contextualization:** Modern curricula are standardized nationally or across regions; IKS knowledge is often highly local and context-specific. How to adapt without losing specificity or making content superficial.
- **Teacher Training and Capacity:** Many teachers are trained in conventional, exam-oriented systems. They may lack knowledge of IKS, or skills to teach through IKS modes.

- **Assessment and Accreditation:** Exams and assessments generally focus on measurable outcomes in defined subjects; IKS based learning (on values, or local knowledge) is harder to assess with standard metrics.
- **Resource Availability:** Some IKS content is in endangered languages, oral traditions; lack of documented texts, pedagogical materials, digital resources.
- **Risk of Appropriation or Misinterpretation:** If IKS is included superficially, there is risk of misrepresenting or commodifying tradition, losing depth or context.
- **Balancing Global Competencies and Local Knowledge:** Gen Z needs global skills (STEM, digital literacy, critical thinking) as well as rootedness. Ensuring neither is compromised.

Frameworks and Models for Integration

Based on literature and case studies, following are promising frameworks and models:

Components	Description	Description
Curriculum Design	Embedding IKS themes across subjects: literature, science, social sciences, arts. Interdisciplinary modules.	A programme where ecology modules include indigenous water harvesting, local flora and fauna, sustainable agriculture in science classes.
Experiential Learning	Learning in situ: field trips, apprenticeships with artisans, learning in natural settings, craft practice, meditation or yoga sessions.	Schools that partner with local craft communities so students learn weaving, pottery, etc., hands-on.
Technology-Enhanced Delivery	Digitization of texts, interactive multimedia, virtual reality experiences of heritage sites, apps for local languages / arts, online mentorship with traditional scholars.	Digital archive of Sanskrit manuscripts, apps teaching classical music ragas, virtual tours of temples with architecture insights.
Teacher Education & Professional Development	Training teachers in both IKS content and pedagogical methods (mentoring, storytelling, experiential, reflective practice).	Workshops for teachers on local ecological knowledge, or philosophy; ongoing professional learning communities.
Assessment Models	Multiple modes of assessment: narrative assessment, portfolios, peer assessment, project-based evaluation, self-reflection especially for values and skills not easily quantified.	A school using student portfolios showing projects around traditional art, ecology, personal growth; combining with traditional exams.
Policy & Institutional Support	Government and institutional policies that recognize IKS, allocate funding, include in teacher training institutions, support research, protect indigenous languages.	National education policies that mandate inclusion of Indian philosophy, Sanskrit or local languages; grants for IKS projects.

Case Studies

1. Ekal Vidyalaya and Folk Knowledge Integration

Ekal Vidyalaya's one-teacher village schools sometimes incorporate local folk stories, environmental

knowledge, crafts, as part of their teaching. These practices help anchor learning in learners' environment; students show higher attendance and involvement in community matters.

2. Yoga and Mindfulness in Schools

Various schools across India have formally adopted yoga and meditation into daily routine. Studies suggest improvements in concentration, stress management, emotional regulation. Gen Z learners often report these practices as helpful in managing anxiety.

3. Digitization of Manuscripts and Local Languages

Projects (for example, by IGNCA, Sahitya Akademi, state governments) digitize regional manuscripts, oral epics, folk music. This enables access for young learners, creation of digital content in multiple formats, and sometimes gamification or interactive content that appeals to Gen Z.

4. Alternative / Experimental Schools

Some schools following alternative pedagogies (e.g., some "heritage schools," "gurukula" inspired experiments, Waldorf / Montessori hybrid models with Indian traditional content) integrate arts, crafts, stories, philosophy, nature, in their curriculum in balanced ways. These often show promising student outcomes in creativity, socio-emotional skills, civic awareness.

Proposed Model: A Hybrid Curriculum for Gen Z in India

Based on synthesis of literature and cases, here is a proposed hybrid model:

Core Academic & Global Skills: Mathematics, sciences, languages (including English), digital literacy, critical thinking to ensure global competitiveness.

IKS Modules:

Philosophy & Ethics Module: Expose students to Indian ethical/philosophical thought (e.g. basic Vedic or Buddhist ethical ideas), facilitating discussions, debates, reflective essays.

Ecology & Sustainability Module: Local environmental knowledge; traditional agricultural practices; water harvesting; biodiversity. Field visits.

Arts, Craft & Cultural Expression Module: Local crafts, folk arts, music, dance, theatre; workshops with artisans.

Mind-Body Well-being Module: Yoga, meditation, mindfulness; possibly Ayurveda basic teachings; mental health awareness.

Pedagogical Principles:

Learning by doing, apprenticeship, project-based learning.

Storytelling, oral traditions, local languages, narratives.

Interdisciplinarity: connections among subjects.

Community involvement: elders, artisans, local community members as teachers/mentors.

Technology Enablers:

Digital content (text, video, VR) for IKS topics.

Mobile apps for field observation, mapping local biodiversity.

Platforms to connect learners with experts of tradition (e.g. craftsmen, local philosophers).

Assessment:

Portfolios, project-based evaluations.

Self and peer reflection.

Narrative assessments for value and character dimensions.

Traditional assessments for core subjects as required.

Teacher Training:

Pre-service and in-service training in IKS content and pedagogy.

Collaboration with traditional scholars and community knowledge-holders.

Platforms for teacher communities to share practice.

Some recommendations

To successfully integrate Indian Knowledge Systems (IKS) into modern education for Gen Z learners, several key strategies must be adopted. Firstly, policy support at both national and state levels is essential; education policies should formally recognize IKS not as an optional or supplementary element but as a core component of curriculum development, teacher training, and institutional planning. Adequate funding should be allocated to ensure its meaningful implementation. Secondly, there is a pressing need for systematic research and documentation of local knowledge, folk practices, oral traditions, and classical texts. This includes identifying effective pedagogical approaches rooted in IKS and evaluating their impact on learning outcomes. Equally important is the capacity building of educators. Teacher training programs must integrate IKS content alongside innovative pedagogical methods and actively foster collaboration with traditional knowledge holders, such as scholars, artisans and community elders. Technology can play a transformative role by making IKS more accessible and engaging to Gen Z through digital archives, interactive tools, and multimedia content—while ensuring that the depth, context, and authenticity of the knowledge are preserved. Finally, community engagement is crucial. Involving local communities in curriculum design and delivery not only strengthens cultural relevance but also creates meaningful, place-based learning experiences for students. Together, these strategies offer a roadmap for reimagining education that is holistic, inclusive, and future-ready.

CONCLUSION

Indian Knowledge Systems offer a rich, multidimensional, and time-tested body of knowledge that can help address many of the deficits that Gen Z learners report: lack of purpose, disconnection from culture and nature, ethical confusion, and mental health challenges. By reimagining education to bridge tradition and innovation, we can craft learning experiences that are globally relevant and yet locally rooted; that foster skills and values; that balance technological proficiency with ecological wisdom and ethical grounding. However, realizing this vision requires careful design and dedicated support: teacher training, curriculum innovation, resource creation, assessment reform, policy backing, and safeguarding of traditions to avoid misrepresentation or superficiality. Policymakers, educational institutions, teachers, communities, and even learners themselves must collaborate.

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