

A MULTIDISCIPLINARY APPROACH TO THE INDIAN KNOWLEDGE SYSTEM: IMPLICATIONS FOR TEACHERS IN THE CONTEXT OF NEP 2020

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Abstract:

The National Education Policy (NEP) 2020 envisions a transformative shift in Indian education, emphasizing a holistic and multidisciplinary approach to learning. A key component of this vision is the integration of the Indian Knowledge System (IKS) into the curriculum. This paper explores the concept of IKS, its multidisciplinary nature, and the challenges and opportunities it presents for teachers. It examines how teachers can effectively integrate IKS into their pedagogy, fostering critical thinking, creativity, and a deeper understanding of India's rich intellectual heritage among students. The paper also discusses the need for teacher training and resource development to support this integration, ultimately arguing that a multidisciplinary approach to IKS is crucial for realizing the goals of NEP 2020 and nurturing well-rounded, culturally aware individuals.

Keywords: Multidisciplinary approach, Pedagogy, Indian Knowledge System, Holistic

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Introduction:

India possesses a vast and diverse body of knowledge accumulated over millennia, encompassing philosophy, mathematics, astronomy, medicine, arts, and more. This Indian Knowledge System (IKS) represents a holistic and interconnected worldview, often contrasting with the compartmentalized approach of modern education. NEP 2020 recognizes the significance of IKS and advocates for its integration into the curriculum at all levels. This integration is not merely about adding a few texts on ancient Indian history or philosophy; it requires a fundamental shift in pedagogy, embracing a multidisciplinary approach that connects different areas of knowledge and encourages students to explore the interconnectedness of disciplines.

Understanding the Indian Knowledge System:

IKS is not a monolithic entity but a constellation of diverse knowledge traditions. It includes:

- * **Philosophical Systems:** Darshanas like Samkhya, Yoga, Vedanta, Nyaya, and Vaisheshika offer profound insights into metaphysics, epistemology, and ethics.
- * **Scientific and Technological Advancements:** Contributions in mathematics (e.g., the concept of zero, decimal system), astronomy (e.g., planetary movements, eclipses), medicine (Ayurveda), metallurgy, and architecture are noteworthy.

- * **Art and Literature:** Classical literature (e.g., Vedas, Upanishads, epics like Ramayana and Mahabharata), performing arts (music, dance, drama), and visual arts (sculpture, painting) are repositories of cultural knowledge and values.
- * **Traditional Practices and Skills:** Indigenous knowledge related to agriculture, water management, crafts, and local healing practices forms an integral part of IKS.

IKS is characterized by:

- * **Holistic Perspective:** It emphasizes the interconnectedness of all phenomena, recognizing the unity of knowledge and experience.
- * **Emphasis on Experiential Learning:** Learning is not just theoretical but also involves practical application and experience.
- * **Integration of Ethics and Values:** IKS places a strong emphasis on ethical conduct and values as essential components of knowledge.
- * **Focus on Observation and Inquiry:** It encourages critical thinking, questioning, and exploration of the natural world.

The Multidisciplinary Nature of IKS:

IKS inherently embodies a multidisciplinary approach. For example, Ayurveda integrates knowledge of botany, chemistry, anatomy, and physiology. Ancient Indian astronomy was intertwined with mathematics, philosophy, and cosmology. Classical literature often reflects the socio-cultural context, historical events, and philosophical ideas of the time. This interconnectedness necessitates a multidisciplinary approach to understanding IKS.

Implications for Teachers:

Integrating IKS into the curriculum presents both challenges and opportunities for teachers. Shifting Pedagogical Approaches: Teachers need to move beyond traditional lecture-based methods and adopt more interactive, experiential, and project-based learning approaches. Multidisciplinary Approach to IKS for Teachers and Students in Context to NEP 2020. The National Education Policy (NEP) 2020 emphasizes the integration of Indian Knowledge Systems (IKS) into the curriculum to promote a holistic and multidisciplinary approach to education. This approach aims to connect students with their cultural heritage while also equipping them with modern skills and knowledge.

For Teachers:

- * **Understanding IKS:** Teachers need to be well-versed in the various aspects of IKS, including traditional Indian literature, philosophy, mathematics, science, arts, and crafts. They should be able to identify the relevant IKS concepts that can be integrated into their respective subjects.
- * **Curriculum Integration:** Teachers should be able to seamlessly integrate IKS into their lesson plans and teaching methodologies. This can be done through storytelling, discussions, projects, and activities that connect IKS with modern concepts.
- * **Experiential Learning:** Teachers should encourage students to engage in experiential learning activities related to IKS, such as visiting historical sites, interacting with traditional artisans, or participating in cultural

events.

- * **Multidisciplinary Approach:** Teachers should collaborate with colleagues from other disciplines to create interdisciplinary projects and activities that showcase the interconnectedness of IKS with various fields of study.
- * **Continuous Professional Development:** Teachers should participate in workshops, seminars, and training programs to enhance their understanding of IKS and learn effective strategies for its integration into the curriculum.

For Students:

- * **Exposure to IKS:** Students should be exposed to various aspects of IKS through classroom learning, field trips, and interactions with experts and practitioners.
- * **Critical Thinking:** Students should be encouraged to critically analyze and evaluate IKS concepts, comparing and contrasting them with modern knowledge systems.
- * **Experiential Learning:** Students should actively participate in experiential learning activities related to IKS, such as hands-on workshops, research projects, and community engagement initiatives.
- * **Multidisciplinary Approach:** Students should be encouraged to explore the connections between IKS and different disciplines, recognizing the relevance of traditional knowledge in contemporary contexts.
- * **Creative Expression:** Students should be encouraged to express their understanding of IKS through various creative mediums, such as essays, presentations, art, music, and drama.

Benefits of a Multidisciplinary Approach to IKS:

- * **Holistic Development:** IKS fosters the holistic development of students by nurturing their intellectual, emotional, social, and cultural growth.
- * **Cultural Awareness:** IKS helps students develop a deeper understanding and appreciation of their cultural heritage, promoting a sense of identity and belonging.
- * **Critical Thinking:** IKS encourages students to think critically and analytically, comparing and contrasting traditional knowledge with modern concepts.
- * **Interdisciplinary Connections:** IKS highlights the interconnectedness of various disciplines, fostering a multidisciplinary approach to learning.
- * **Innovation and Creativity:** IKS can inspire innovation and creativity by exposing students to diverse perspectives and problem-solving approaches.

By adopting a multidisciplinary approach to IKS, teachers and students can work together to create a learning environment that is both culturally enriching and academically stimulating, aligning with the goals of NEP 2020. The multidisciplinary approach to the Indian Knowledge System (IKS) is deeply intertwined with the vision of the National Education Policy (NEP) 2020, which emphasizes integrating traditional knowledge with contemporary education across disciplines. Here's how the multidisciplinary approach aligns with NEP 2020:

1. Philosophy of NEP 2020:

NEP 2020 envisions a holistic and multidisciplinary education system that integrates sciences, arts, and

humanities while drawing upon India's rich cultural and knowledge heritage. This ensures: Interconnected Learning: Blurring the boundaries between disciplines to provide well-rounded education. Value-Based Education: Instilling ethics, sustainability, and respect for diverse knowledge systems.

2. Indian Knowledge System (IKS) Framework:

IKS represents India's indigenous knowledge traditions in areas such as mathematics, astronomy, linguistics, medicine, architecture, governance, and arts. A multidisciplinary approach brings these elements into mainstream education:

Yoga & Ayurveda in health sciences.

Vedic Mathematics in modern mathematics education.

Indian philosophy and ethics in humanities.

Sustainable practices from traditional agriculture and water management systems in environmental studies.

3. Implementation in Education:

Curricular Integration: NEP 2020 calls for embedding IKS across subjects. For example, introducing ancient texts like the Sulbasutras in geometry or studying the ecological wisdom in Arthashastra.

Research & Innovation: Establishing research centers to study and validate IKS, such as through the Bharatiya Gyan Parampara.

Language Connection: Promoting Indian languages as mediums of instruction to explore regional IKS resources.

Teacher Training: Equipping educators with resources to teach IKS in a multidisciplinary framework.

4. Global Relevance of IKS:

The multidisciplinary approach helps contextualize IKS in global paradigms, such as comparing Indian governance models with modern political science or integrating traditional Indian architecture principles into sustainable urban planning. This fosters critical thinking and a global perspective.

5. Technological Integration:

NEP 2020 encourages using digital tools to preserve and propagate IKS. AI and machine learning can help digitize manuscripts, while augmented reality can bring ancient techniques to life in classrooms.

6. Examples of Multidisciplinary IKS in Action:

Teaching classical music (ragas) alongside neuroscience to show its impact on mental health. Merging traditional water conservation systems (like stepwells) with civil engineering courses. Ethnobotany connecting Ayurveda with modern biology. This approach, supported by NEP 2020, builds a bridge between India's heritage and modern education, making it relevant to today's learners while preserving its cultural richness.

Conclusion:

The integration of the Indian Knowledge System into modern education through a multidisciplinary approach is crucial for realizing the vision of NEP 2020. By incorporating traditional wisdom with contemporary pedagogical strategies, teachers can foster a deeper understanding of India's rich intellectual heritage while



preparing students for global challenges. This approach not only enhances cultural awareness but also strengthens critical thinking and problem-solving skills. Therefore, effective teacher training programs, curriculum reforms, and research initiatives are essential to successfully implementing IKS in the modern education system.

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