

# An Overview On The Indian Knowledge System: Concept And Application From Ancient To Modern Era

Sanghamitra Basu Roy

Assistant Professor  
Department Of Education,  
Mahadevananda Mahavidyalaya

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## Abstract:

*The Indian Knowledge System (IKS) is a rich tapestry of intellectual traditions, encompassing diverse domains like philosophy, mathematics, astronomy, medicine, architecture and arts, with roots stretching back over millennia. Ancient Indian education was deeply intertwined with these systems, flourishing through institutions like Gurukuls and Vidyalaya, where holistic learning emphasized the interconnectedness of knowledge, ethics and life skills. Subjects ranged from the Vedas and Upanishads to advanced studies in linguistics, Ayurveda and Logic. The National Education Policy (NEP) 2020 marks a critical juncture in this journey by advocating for the revival and integration of the Indian Knowledge System into modern education. NEP 2020 emphasizes the need for a balanced and holistic approach that blends the ancient wisdom of India with modern advancements in science and technology. By promoting interdisciplinary learning, creative thinking, and cultural awareness, the NEP aims to reshape education in India to reflect both global standards and indigenous traditions. The abstract explores how the evolution of Indian education has been influenced by the Indian Knowledge System from ancient to modern times, with a special focus on how NEP 2020 seeks to reintegrate this rich legacy into contemporary educational frameworks. It highlights the potential of IKS to create a new era of education that is not only future-ready but also rooted in India's diverse cultural heritage.*

**Keywords:** Indian Knowledge System, National Educational Policy, Ancient Indian Education, Knowledge, Cultural awareness.

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## I. Introduction:

The Indian Knowledge System (IKS) is a rich tapestry of intellectual traditions, encompassing diverse domains like philosophy, mathematics, astronomy, medicine, architecture and arts with roots stretching back over millennia. Ancient Indian education was deeply intertwined with these systems, flourishing through institutions like Gurukuls and Vidyalaya, where holistic learning emphasized the interconnectedness of knowledge, ethics, and life skills. Subjects ranged from the Vedas and Upanishads to advanced studies in linguistics, Ayurveda, and logic.

Indian Knowledge System (IKS) refers to the rich and diverse body of knowledge that has developed over millennia in the Indian subcontinent. It encompasses various disciplines, including philosophy, science, mathematics, medicine, arts, architecture, literature and spirituality. The IKS is characterized by its holistic and integrative approach, emphasizing the interconnectedness of different aspects of life and the universe.

The Indian Knowledge System is increasingly being revisited and integrated into modern education and practices, both in India and globally. Its emphasis on sustainability, holistic health, and ethical living is seen as highly relevant in addressing contemporary challenges.

With the advent of colonial rule, however, the traditional knowledge systems were marginalized in favor of Western education models. With the focus moving towards rote learning, standardized examinations, and compartmentalized knowledge domains. Post-independence, India continued to follow this model, though efforts were made to reintegrate indigenous knowledge and values at various points.

The National Education Policy 2020 marks a critical juncture in this journey by advocating for the revival and integration of the Indian Knowledge System into modern education. NEP 2020 emphasizes the need for a balanced and holistic approach that blends the ancient wisdom of India with modern advancements in science and technology. By promoting interdisciplinary learning, creative thinking, and cultural awareness, the NEP aims to reshape education in India to reflect both global standards and indigenous traditions.

**Objective of the Study:** The primary objective of this study is to explore the evolution and influence of the Indian Knowledge System (IKS) on the development of education from ancient times to the present, with a specific focus on how the National Education Policy (NEP) 2020 aims to integrate IKS into the contemporary educational framework. This study aims to achieve the following objectives:

- 1) Examine the core principles of the Indian Knowledge System and how they shaped the educational practices of ancient India, including the Gurukul system and the contributions of institutions like Takshashila and Nalanda.
- 2) Investigate the post-independence efforts to reintegrate the Indian Knowledge System into the educational framework and the extent to which these efforts were successful or limited.
- 3) Assess the vision and role of NEP 2020 in reviving and mainstreaming IKS within modern education, including its impact on curriculum development and pedagogy ..
- 4) Explore the interdisciplinary approach promoted by NEP 2020 and how it aims to blend IKS with modern science, technology, and humanities education to create a holistic and culturally relevant education system.

**Research Question:**

- 1) What are the core components of the Indian Knowledge System (IKS) and how did they shape ancient Indian education?
- 2) How did the Gurukul system of education foster holistic development in students during ancient times?
- 3) How does the National Education Policy (NEP) 2020 envision the role of Indian Knowledge Systems in shaping the future of education?
- 4) In what ways can the interdisciplinary approach promoted by NEP 2020 enhance the understanding and application of IKS in contemporary education?

## **II. Methodology:**

For the present study descriptive method has been applied. The relevant secondary data and information have been collected from different books, research journals, E journals and research magazines.

This study seeks to offer a comprehensive understanding of the Indian Knowledge System's enduring relevance and its potential to shape future generations by harmonizing ancient wisdom with modern educational goals.

**Analysis:** The Indian Knowledge System (IKS) refers to the rich and diverse body of knowledge that has developed over millennia in the Indian subcontinent. It encompasses various disciplines, including philosophy, science, mathematics, medicine, arts, architecture, literature and spirituality.

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The Indian Knowledge System is increasingly being revisited and integrated into modern education and practices, both in India and globally. Its emphasis on sustainability, holistic health, and ethical living is seen as highly relevant in addressing contemporary challenges.

Indian Knowledge System represents a vast, multidisciplinary tradition that has profoundly influenced various fields of knowledge and continues to offer valuable insights in today's world.

Traditional Indian Education is deeply interwoven with the Indian Knowledge System (IKS) as it served as the primary means of transmitting and preserving this vast body of knowledge across generations. The traditional education system was designed not only to impart practical skills and knowledge but also to inculcate values, ethics and a holistic understanding of life, which are central to the Indian Knowledge System.

Indian Knowledge System is a vast, diverse and holistic body of knowledge that evolved over millennia, incorporating spiritual, philosophical, scientific, artistic and practical elements of life. The core components of the Indian Knowledge System shaped ancient Indian Education in profound ways, providing a foundation for intellectual, moral and social development. The key components of the Indian Knowledge System include:

Vedic Knowledge, Philosophy and Logic, Mathematics and Astronomy, Ayurveda (Medicine), Language and Grammar, Ethics and Dharma, Arts and Aesthetics, Logic, Debate and Dialectics, and Spiritual and Religious Studies.

The foundation of Indian Knowledge, the Vedas (Rigveda, Samaveda, Yajurveda, Atharvaveda) encompass hymns, rituals and philosophy. Six auxiliary disciplines (Phonetics, grammar, prosody, etymology, astronomy and rituals) supported the understanding of the Vedas.

Six schools of Indian Philosophy Nyaya, Vaisheshika, Samkhya, Yoga, Mimamsa and Vedanta explored reality, logic and ethics. Ancient Indian contributions to mathematics, including concepts like zero, decimal system and algebra, played a key role.

Ayurveda, the traditional system of medicine, included anatomy, physiology, diagnosis and treatment, reflecting a deep understanding of life sciences and health education.

Sanskrit grammar, especially as formulated by Panini, formed a critical component of ancient Indian education, as mastery of language was seen as key to accessing and preserving knowledge.

The concept of Dharma as articulated in texts like the Mahabharata and Manu smriti, guided moral and ethical education. Stories from the Ramayana, Mahabharata and the Puranas were key in imparting moral, ethical and spiritual lessons.

The Upanishads, Brahmanas and various sutras explored metaphysics, spirituality and the nature of existence. Yoga and Meditation were not only for physical well-being but also for mental and spiritual growth, a core component of education.

Some traditional Indian Education and their relation to Indian Knowledge System.

The Gurukul system was the cornerstone of traditional Indian education. Students lived with their teacher in a hermitage or ashram, learning through direct interaction and observation. Gurukul meant residence in teacher's house for education after Upanayan till the Samavartana. This was the period of Antevasin. The spirit of 'Gurukul' was implied in the Upanayana system itself. The Gurukul implied the recognition of the value of habit, routine, imitation, sympathy and suggestions. By emulation of the elderly scholars, the younger learners developed an association with the school. Discipline was a natural phenomenon of such a life. The student had to contribute his labour to keep the Gurukul going. This was inherent in the concept of 'Asrama'. Instruction was individualized and education was free from tuition charges. Such a system of schooling meant the teacher's position of high esteem and authority. He was the father substitute for the pupils. He had to be an embodiment of intellectual and spiritual ideals. The teacher had to be spiritually qualified and well versed. He had to adopt the pupil and lead him to light. He looked after the necessary comfort of the pupil and he was the sole arbiter, rewarder and punisher.

Such a school life ensured character- formation through direct, personal and continuous contact between teacher and pupil. The personal angularities of pampered children were toned down in the collective life in Gurukul. The student was thus socialized and transformed into a complete man.

This system emphasized oral transmission of knowledge, where students learned Vedic texts, philosophy, science, mathematics, arts and other subjects by recitation, memorization and discussion. This methods ensured the preservation of IKS over generations.

The education was not limited to academic learning but also included the development of character, discipline and moral values, aligning with the holistic approach of the IKS.

Students were taught the Vedas and Upanishads, which form the foundation of Indian Philosophy, spirituality and ethics. These texts encapsulate much of the Indian Knowledge System, including cosmology, metaphysics and ritual practices. Subjects like mathematics, astronomy, medicine and arts were integral parts of the curriculum, directly reflecting the diverse disciplines of the Indian Knowledge System.

Taxila University had originated in the Brahmanic era and existed till the Buddhist era, thereby enjoying a long life. Its curricula included the three Vedas, various sciences and arts, vocational subjects. Astronomy, astrology, commerce, agriculture, accountancy, the art of magic, etc. Abstract learning was sought to be combined with practical efficiency. Similarly Nalanda curricula consisted of Brahmanic and Buddhist scriptures, religious and popular works, arts and Science alike, combining theory with practice. The curriculum included the 4 Vedas, Buddhist Scriptures, Philosophy, Hetu, Sabda, Medicine, Linguistics, Law, Astronomy, Sankhya, Sanskrit and Panini etc. Discussions and debates were important elements of teaching technology. Self study was much valued.

The education system was based on Shruti or Sravana (that which is heard), Manana or Smriti (that which is remembered), and Nididhyasana, which represent different ways of preserving knowledge. Shruti refers to knowledge passed down orally while Smriti involves remembered texts. Actually Sravana, Manana, Nididhyasana were the methods of learning. Yoga was the supreme stage, Instruction was individualized, but debating and discussions were valued. Including more attention listen the lecture of Guru was sravana. Thinking of these lecture of the guru or teacher was manana and try to realize the main truth of lecture of the guru or teacher was Nididhyasana. This distinction reflects the dual focus of Indian Knowledge System on both divine revelation and human tradition.

Teaching often involved a question and answer approach, similar to the Socratic method, where students engaged in debates and discussions. This method nurtured critical thinking and deep understanding, essential for grasping the complexities of Indian Knowledge System. The education system emphasized living in harmony with nature, understanding one's duties (dharma), and developing a sense of responsibility towards society. These values are central to the Indian Knowledge System, which promotes an integrated view of life where knowledge is not just for personal gain but for the well-being of the community and cosmos.

Education was deeply rooted in spirituality and ethics, which are key components of the Indian Knowledge System. Students were taught to seek truth, practice self discipline and cultivate inner wisdom,

reflecting the Indian Knowledge System 's emphasis on the pursuit of knowledge as a means to spiritual liberation (moksha)

Traditional Indian education was the living embodiment of the Indian Knowledge System, serving as the primary means of preserving, transmitting and evolving this extensive body of knowledge. The holistic, value based and integrative approach of traditional education ensured that students not only acquired knowledge but also developed the wisdom and ethical foundation necessary to apply it for the greater good. This deep interconnection continues to influence modern educational approaches that seek to integrate Indian knowledge system principles.

Now discuss the post-independence efforts to reintegrate the Indian Knowledge System into the educational framework.

The concept of education as articulated by the Delors Commission, particularly through its report titled 'Learning: The Treasure Within' (1996), offers a framework that aligns in many ways with the principles of the Indian Knowledge System (IKS). The Delors Commission, established by UNESCO and led by Jacques Delors, emphasized four pillars of education.

Learning to Know: Acquiring knowledge and developing cognitive abilities, promoting the idea that education should help individuals to learn how to learn throughout life.

Learning to Do: Equipping individuals with skills to engage in productive work and adapt to changing environments.

Learning to Be: Fostering the holistic development of individuals, including their emotional, intellectual and moral dimensions.

Learning to Live Together: Encouraging social skills and intercultural understanding to promote peace, tolerance and cooperation.

The Delors Commission's emphasis on 'Learning to Be' is closely aligned with the Indian Knowledge System's holistic approach to education, which integrates intellectual, emotional, spiritual and moral development. In traditional Indian education, the focus was not just on imparting knowledge but on shaping the overall character and consciousness of the learner.

The Indian Knowledge System stresses the importance of spiritual growth and ethical living, which corresponds with the Delors Commission's focus on nurturing a well-rounded human being.

'Learning to Know.' As described by the Delors Commission, parallels the IKS's emphasis on lifelong learning. Traditional Indian education, particularly in the Guru Kul system, encouraged continuous learning and self improvement, often under the guidance of a guru throughout one's life.

The concept of 'Learning to Do' in the Delors framework resonates with the practical aspects of IKS, where education also include training in various arts ,crafts and sciences that were essential for livelihood and societal contribution .In traditional Indian education, there was an emphasis on adaptability and the application of knowledge in real -world scenarios, similar to the Delors commission's focus on equipping learners with skills for a rapidly changing world.

The pillar of 'Learning to Live Together' echoes the IKS's principles of living in harmony with others and the environment. Indian philosophy, as taught in traditional education, often stressed well-being, cooperation and the idea of 'Vasudhaiva Kutumbakam'. The Indian Knowledge System has historically embraced a diversity of thoughts, practices and beliefs, which aligns with the Delors Commission's call for education to foster intercultural understanding and peace.

The Delors Commissions concept of education and the Indian Knowledge System share significant common ground, particularly in their emphasis on holistic development, lifelong learning and social harmony. While the Delors framework has influenced modern educational reforms in India, these reforms also draw from the rich traditions of Indian Knowledge System, blending ancient wisdom with contemporary educational principles to create a system that is both rooted in Indian culture and responsive to global challenges.

National Education Policy (NEP) 2020 of India places a significant emphasis on the Indian Knowledge System (IKS) as part of its broader vision to create an education system that is rooted in India's culture, traditions and values while being globally relevant and competitive. The NEP 2020 seeks to integrate the Indian Knowledge System into the mainstream education framework for several reasons, reflecting both the influence of Indian Knowledge System and the policy s intention to preserve and promote India's intellectual heritage.

NEP 2020 recognizes the importance of India 's vast and diverse intellectual heritage. By integrating Indian Knowledge into the education system, the policy aims to ensure that students are aware of and take pride in India's rich history of Knowledge and innovation. The policy seeks to strengthen cultural identity by making education more relevant to the Indian context. By learning about IKS, students develop a deeper connection to their cultural roots, fostering a sense of identity and continuity. NEP 2020 policy stresses the importance of well rounded development, including moral, ethical, and spiritual growth, which are key components of Indian Knowledge System. IKS includes knowledge systems that promote sustainable living and respect for nature, which are increasingly relevant in the context of global environmental challenges. The policy highlights the

importance of ethical education, which is deeply rooted in IKS, where values such as dharma and ahimsa are central. The policy advocates for the integration of IKS with modern science and technology, believing that a combination of traditional wisdom and contemporary knowledge can lead to innovative solutions.

NEP 2020's emphasis on the Indian Knowledge System reflects a deliberate effort to harmonize traditional wisdom with modern education. The policy is heavily influenced by IKS in its approach to holistic development, sustainability, ethical education and cultural preservation. By integrating IKS into the educational framework, NEP 2020 aims to create a system that is not only aligned with India's cultural heritage but also capable of producing globally competent and culturally grounded individuals. This approach seeks to ensure that India's educational system is both innovative and reflective of its rich intellectual traditions.

The recent undergraduate curriculum and teaching methods in India have been increasingly influenced by the Indian Knowledge System (IKS), reflecting the principles and objectives set forth in the National Education Policy (NEP) 2020. This influence is evident in several areas, including curriculum design, pedagogy, interdisciplinary learning and the emphasis on cultural and ethical education. The influence of the Indian Knowledge System on recent undergraduate curricula and teaching methods in India is substantial and growing. The NEP 2020 has catalyzed a shift towards integrating IKS into mainstream education, leading to more holistic, culturally relevant and interdisciplinary approaches to learning. This shift is helping to produce graduates who are not only skilled and knowledgeable in their chosen fields but also deeply rooted in their cultural heritage and capable of applying traditional wisdom to contemporary challenges. Students are gaining a broader perspective that integrates traditional Indian wisdom with modern education. This holistic approach is helping students develop a more well-rounded view of their disciplines and their applications. The integration of Indian Knowledge System in the curriculum is fostering greater cultural awareness and pride among students. They are learning to appreciate the contributions of Indian civilization to global knowledge, which is enhancing their sense of identity and belonging. By learning about traditional knowledge systems students are encouraged to think innovatively about how ancient wisdom can address modern challenges, such as in sustainable development, health and social ethics. Several universities have established dedicated centers or departments for the study and promotion of Indian Knowledge Systems. These centers focus on research, documentation, and teaching of IKS, offering specialized courses and degrees. Institutions are reforming their curricula to include modules on IKS as part of general education requirements. This ensures that all students, regardless of their major, receive some exposure to India's traditional knowledge systems.

The Indian Knowledge System forms the bedrock of India's rich intellectual, cultural and spiritual traditions, spanning various disciplines such as philosophy, science, mathematics, medicine and the arts. In ancient times, education in India, through institutions like Gurukuls and universities such as Nalanda and Takshashila, emphasized holistic learning, blending theoretical knowledge with practical skills, ethics and spiritual growth. The traditional Indian education model was interconnected and interdisciplinary fostering a sense of balance between mind, body and soul.

The National Education Policy 2020 marks a significant shift in this landscape by recognizing the relevance of IKS in modern education. It seeks to bridge the gap between ancient wisdom and contemporary advancements in science and technology. By promoting an interdisciplinary and holistic approach, NEP 2020 paves the way for a more balanced education system, one that equips students with both global knowledge and a deep connection to their cultural heritage. The policy encourages the inclusion of Indian Knowledge System in curricular, research and vocational training, fostering creativity, critical thinking and sustainability.

**In conclusion**, the Indian Knowledge System with its profound emphasis on holistic development and interconnected learning, offers valuable insights for reshaping modern education. The NEP 2020 provides an opportunity to harmonize the wisdom of the past with the needs of the present, positioning India as a leader in innovative and culturally grounded education. By reviving and integrating IKS into contemporary frameworks, the nation can offer a model of education that is both future-oriented and rooted in its intellectual heritage.

Overall, the Indian Knowledge System fostered a learning environment where the pursuit of wisdom, moral conduct, scientific inquiry, and spiritual growth were closely intertwined, shaping a unique and profound educational tradition.

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