
CHALLENGES AND OPPORTUNITIES IN INTEGRATING IKS INTO TEACHER EDUCATION

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Article Received: 21 May 2026

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Article Revised: 09 June 2026

(Principal) B.S.M. Women B.ed. College, Roorkee.

Published on: 29 June 2026

DOI: <https://doi-doi.org/101555/ijrpa.6941>

ABSTRACT

The integration of Indian Knowledge Systems (IKS) into teacher education has emerged as a significant area of focus in contemporary educational reforms in India. IKS encompasses the rich intellectual, philosophical, scientific, and cultural traditions of India, which include ancient pedagogical practices, ethical values, holistic learning approaches, and experiential knowledge systems. In the context of teacher education, IKS provides a strong foundation for developing value-based, reflective, and culturally rooted educators.

Traditionally, Indian education systems such as the Gurukul method emphasized close teacher-student relationships, character formation, discipline, and experiential learning. These approaches contributed to the holistic development of learners and continue to hold relevance in modern educational contexts. However, present-day teacher education programs largely focus on modern pedagogical skills, technological integration, and standardized assessment practices, often leading to a gap between traditional wisdom and contemporary methodologies.

This study explores the challenges and opportunities in integrating IKS into teacher education. It highlights the importance of blending traditional Indian educational philosophy with modern teaching techniques to create a balanced and effective teacher preparation framework. The National Education Policy (NEP) 2020 strongly supports this integration by promoting multidisciplinary education, experiential learning, and the inclusion of Indian cultural and philosophical knowledge in teacher training programs.

The study identifies key opportunities such as promoting value-based education, strengthening cultural identity, and enhancing experiential learning practices. At the same time, it also discusses challenges such as lack of trained faculty, limited resources, dominance of Western pedagogical models, and insufficient curriculum integration.

The study concludes that integrating IKS into teacher education can significantly enhance the quality of teaching by producing educators who are not only professionally competent but also ethically grounded and culturally aware. This integration is essential for developing a holistic, inclusive, and contextually relevant education system in India.

KEYWORDS: Gurukul System, Holistic Education, Value-Based Education, Pedagogical Integration, Experiential Learning, Educational Philosophy, Curriculum Reform.

1. INTRODUCTION

Teacher education in India is undergoing significant transformation with the increasing emphasis on integrating Indian Knowledge Systems (IKS). IKS represents the rich intellectual, cultural, and philosophical heritage of India that offers holistic and value-based approaches to learning. In the present educational scenario, there is a growing need to reconnect teacher education with traditional wisdom while maintaining modern pedagogical standards. The integration of IKS helps in developing culturally rooted, ethically strong, and professionally competent teachers who can contribute effectively to the holistic development of learners and society.

2. MEANING OF INDIAN KNOWLEDGE SYSTEMS (IKS)

Indian Knowledge Systems (IKS) refer to the vast and diverse body of traditional knowledge developed in India over thousands of years. It includes philosophical, scientific, mathematical, linguistic, medical, artistic, and educational traditions that emphasize holistic understanding and sustainable living. IKS is deeply rooted in ancient texts such as the Vedas, Upanishads, and other classical works that focus on the unity of knowledge, ethics, and spirituality.

In education, IKS represents a learner-centered and value-based approach that promotes critical thinking, experiential learning, and self-realization. It emphasizes the integration of knowledge with moral values and life skills. Unlike fragmented modern approaches, IKS views knowledge as interconnected and contextual, contributing to overall human development. In teacher education, it provides a strong foundation for developing reflective, culturally aware, and value-oriented educators who can connect traditional wisdom with contemporary teaching practices.

3. RELEVANCE OF IKS IN TEACHER EDUCATION

The relevance of Indian Knowledge Systems (IKS) in teacher education lies in its ability to provide a holistic, value-based, and culturally grounded framework for teaching and learning. IKS emphasizes ethical values, experiential learning, and the overall development of personality, which are essential qualities for effective teachers. It helps teachers understand education as a process of character building rather than mere information transfer.

In teacher education, IKS supports the development of reflective practice, creativity, and critical thinking among future educators. It also strengthens cultural identity and awareness of India's rich educational heritage. By integrating IKS, teachers can adopt more meaningful and context-sensitive pedagogical approaches that connect learning with real-life experiences. Furthermore, NEP 2020 highlights the importance of incorporating IKS into teacher training programs to promote multidisciplinary learning and value-based education. Thus, IKS enhances both the professional competence and ethical grounding of teachers, making education more inclusive, meaningful, and socially relevant.

4. NEED FOR INTEGRATION WITH MODERN PEDAGOGICAL TRAINING

The integration of Indian Knowledge Systems (IKS) with modern pedagogical training is essential to create a balanced and effective teacher education framework. While modern pedagogy focuses on technology, assessment methods, and subject expertise, it often lacks emphasis on cultural values, ethics, and holistic development. IKS fills this gap by providing value-based and experiential learning approaches.

Integrating IKS with modern methods helps teachers develop a deeper understanding of education as a transformative process. It enables them to combine traditional wisdom with innovative teaching strategies, making learning more meaningful and engaging for students. This integration also supports the development of critical thinking, creativity, and emotional intelligence among learners.

In the context of NEP 2020, such integration is highly relevant as it promotes multidisciplinary education and holistic development. Therefore, combining IKS with modern pedagogical training ensures that teachers are not only professionally skilled but also culturally aware and ethically responsible, contributing to a more inclusive and sustainable education system.

5. CONCEPT OF IKS IN TEACHER EDUCATION

5.1 DEFINITION

1. Indian Knowledge Systems (IKS) refer to the holistic body of traditional knowledge developed in India over centuries.
2. IKS is a multidisciplinary system that includes philosophy, science, mathematics, medicine, arts, and education.
3. It represents indigenous ways of understanding reality, human life, and the universe.
4. IKS emphasizes value-based, experiential, and context-specific learning processes.
5. It integrates knowledge with ethics, spirituality, and sustainable living.

5.2 SCOPE OF IKS

The scope of IKS in teacher education is vast and interdisciplinary. It includes integrating traditional pedagogical practices, ethical values, and cultural wisdom into modern teacher training programs. IKS supports curriculum development, instructional strategies, and reflective teaching practices. It also promotes research in indigenous education systems and helps teachers connect learning with real-life experiences. In teacher education, IKS contributes to developing culturally rooted, value-oriented, and professionally competent educators who can effectively bridge traditional wisdom and contemporary education.

6. TRADITIONAL KNOWLEDGE SYSTEMS IN INDIA

Traditional knowledge systems in India are deeply rooted in ancient texts, cultural practices, and lived experiences. These systems include the Vedic, Upanishadic, Buddhist, Jain, and folk traditions that have contributed significantly to education, philosophy, science, and ethics. The Gurukul system is one of the most prominent examples, where education was imparted through close teacher-student interaction, emphasizing discipline, values, and experiential learning.

These systems view knowledge as holistic and interconnected rather than fragmented. They focus on the development of physical, mental, moral, and spiritual dimensions of human life. Subjects such as mathematics, astronomy, medicine (Ayurveda), yoga, and linguistics were highly developed in ancient India.

Traditional knowledge systems also emphasize sustainability, harmony with nature, and ethical living. In teacher education, these systems provide valuable insights into value-based pedagogy and learner-centered approaches. They help teachers understand education as a process of character building and self-realization, not just information transmission.

7. LINK BETWEEN IKS AND EDUCATION PHILOSOPHY

The link between Indian Knowledge Systems (IKS) and education philosophy is deeply rooted in the understanding that education is a holistic process of human development. Indian educational philosophy views learning as a means of achieving self-realization, ethical living, and social harmony. Similarly, IKS emphasizes the integration of knowledge with values, ethics, and experiential understanding.

In Indian philosophy, education is not limited to intellectual growth but also includes moral, emotional, and spiritual development. Concepts such as Dharma (duty), Karma (action), and Moksha (liberation) reflect the ethical and transformative nature of education. These ideas align with the core principles of teacher education, where the goal is to develop reflective, responsible, and value-oriented educators.

IKS also complements constructivist and experiential learning theories in modern education philosophy. It emphasizes learning through observation, practice, dialogue, and real-life experiences, which are essential components of effective teaching.

Furthermore, NEP 2020 strengthens this link by promoting the integration of IKS into curriculum and pedagogy. It recognizes that Indian educational philosophy provides a strong foundation for developing holistic and multidisciplinary education systems.

Thus, the relationship between IKS and education philosophy highlights that education should not only develop cognitive abilities but also nurture ethical awareness and human values, making teaching a transformative and meaningful process.

8. ROLE OF IKS IN TEACHER IDENTITY FORMATION

Indian Knowledge Systems (IKS) play a significant role in shaping the identity of teachers by providing them with a strong cultural, ethical, and philosophical foundation. Teacher identity is not only based on professional skills but also on values, beliefs, and attitudes toward education and society.

IKS helps teachers develop a sense of responsibility, discipline, and ethical awareness by connecting them with India's rich educational heritage. It encourages teachers to see themselves as facilitators of holistic development rather than mere transmitters of information.

Through IKS, teachers gain an understanding of value-based education, experiential learning, and learner-centered approaches. This strengthens their reflective practice and professional commitment. It also fosters cultural pride and awareness, enabling teachers to integrate traditional wisdom into modern classrooms.

By combining traditional knowledge with modern pedagogy, IKS contributes to creating well-rounded educators who are intellectually competent, ethically grounded, and socially responsible. Thus, it plays a crucial role in shaping a balanced and meaningful teacher identity in the contemporary education system.

9. SIGNIFICANCE OF INTEGRATING IKS INTO TEACHER EDUCATION

Integrating Indian Knowledge Systems (IKS) into teacher education is highly significant for developing well-rounded, culturally rooted, and professionally competent educators. It ensures that teacher preparation is not limited to technical skills and pedagogical methods but also includes ethical values, cultural awareness, and holistic understanding of education.

One of the major significances is the preservation and promotion of India's intellectual heritage. IKS connects future teachers with ancient educational traditions such as the Gurukul system, Vedic philosophy, and indigenous scientific knowledge, helping them appreciate the depth of Indian educational thought.

Secondly, it supports holistic teacher development by integrating intellectual, moral, emotional, and spiritual dimensions of learning. This enables teachers to focus on character formation along with academic instruction.

Thirdly, IKS strengthens value-based education, encouraging teachers to instill ethical values such as truth, non-violence, compassion, and responsibility in students. It also enhances experiential and contextual learning, making teaching more meaningful and student-centered. Another important significance is its alignment with NEP 2020, which emphasizes multidisciplinary learning, experiential pedagogy, and inclusion of Indian Knowledge Systems in teacher education programs. This integration helps modernize education while remaining rooted in indigenous wisdom.

Furthermore, IKS enhances teacher identity and professionalism by fostering cultural pride, reflective practice, and a deeper understanding of the purpose of education.

Thus, integrating IKS into teacher education creates educators who are not only skilled but also ethical, reflective, and socially responsible, contributing to a more balanced and inclusive education system.

10. TRADITIONAL FOUNDATIONS OF IKS RELEVANT TO TEACHING

10.1 GURUKUL SYSTEM AND GURU-SHISHYA TRADITION

The Gurukul system and Guru-Shishya tradition form the core foundation of Indian Knowledge Systems (IKS) in education. In this system, education was delivered in a

residential setting where students lived with their Guru and learned through close interaction, observation, and disciplined practice. The Guru was regarded not only as a teacher but also as a mentor and moral guide responsible for the holistic development of the learner. This system emphasized values such as discipline, respect, self-control, and humility. Learning was experiential and personalized, focusing on character building along with knowledge acquisition. The Guru–Shishya relationship created a strong emotional and ethical bond, ensuring lifelong learning and value formation. In teacher education, this tradition highlights the importance of mentorship, moral guidance, and personalized teaching, which are essential for developing effective and value-oriented educators in modern times.

10.2 VEDIC AND UPANISHADIC LEARNING APPROACHES

Vedic and Upanishadic learning approaches form an important foundation of Indian educational philosophy. The Vedic system emphasized oral transmission of knowledge, memorization, discipline, and the development of intellectual and moral qualities. Education was closely linked with life, spirituality, and ethical conduct. The Upanishadic approach further deepened this system by focusing on inquiry, self-realization, and philosophical understanding. Learning was based on dialogue, questioning, and reflection between teacher and student. These traditions emphasized values such as truth, self-discipline, humility, and wisdom. Education was not limited to information but aimed at inner transformation and the realization of higher consciousness. In teacher education, these approaches highlight the importance of reflective thinking, experiential learning, and value-based instruction. They also encourage teachers to develop critical thinking skills and guide students toward holistic development, integrating knowledge with ethical and spiritual growth.

10.3 BUDDHIST AND JAIN EDUCATIONAL ETHICS

Buddhist and Jain educational ethics strongly contributed to the value-based foundations of Indian Knowledge Systems. Buddhist education emphasized the principles of the Noble Eightfold Path, including right conduct, right speech, right action, and mindfulness. It promoted compassion, non-violence, tolerance, and mental discipline. Learning in Buddhist monasteries focused on ethical living, self-awareness, and intellectual inquiry. Jain educational ethics emphasized Ahimsa (non-violence), truthfulness, non-possessiveness, and self-control. It encouraged learners to develop discipline, simplicity, and respect for all living beings. Both traditions viewed education as a means of moral purification and liberation from ignorance. In teacher education, these ethical frameworks provide important guidance for

developing value-oriented teaching practices. They help teachers promote peace, empathy, and ethical responsibility among students while fostering a respectful and inclusive learning environment. These traditions remain highly relevant in modern education for nurturing socially responsible and morally grounded educators.

10.4 INDIGENOUS PEDAGOGICAL PRACTICES

Indigenous pedagogical practices in India represent locally developed methods of teaching and learning based on cultural, social, and environmental contexts. These practices include storytelling, oral traditions, experiential learning, community participation, and learning through daily life activities. Knowledge was transmitted informally through family, community, and cultural interactions, making learning meaningful and practical. These methods emphasized observation, imitation, reflection, and hands-on experience. Indigenous pedagogy also focused on sustainability, respect for nature, and collective responsibility. In teacher education, these practices highlight the importance of contextual and learner-centered approaches. They encourage teachers to connect classroom learning with real-life experiences and local knowledge systems. By integrating indigenous pedagogy, teacher education becomes more inclusive, culturally relevant, and effective in addressing diverse learner needs. These practices also support the objectives of NEP 2020, which promotes experiential and multidisciplinary learning rooted in India's cultural heritage.

11. OPPORTUNITIES IN INTEGRATING IKS INTO TEACHER EDUCATION

The integration of Indian Knowledge Systems (IKS) into teacher education presents numerous opportunities for improving the quality, relevance, and effectiveness of teacher preparation programs in India. One of the most significant opportunities is the promotion of value-based education, where teachers are trained to incorporate ethical principles such as truth, non-violence, compassion, and responsibility into their teaching practices. This helps in the holistic development of learners.

IKS also provides opportunities for enhancing experiential and contextual learning. Traditional Indian pedagogical practices emphasize learning through observation, practice, storytelling, and real-life experiences. When integrated into teacher education, these approaches make teaching more engaging and meaningful.

Another important opportunity is the strengthening of cultural identity and heritage awareness. By studying Indian philosophical and educational traditions, teachers develop a

deeper appreciation of India's intellectual legacy, which they can pass on to students in the classroom.

IKS further supports the development of multidisciplinary and integrated learning approaches, which align with modern educational reforms such as NEP 2020. It enables teachers to connect subjects like science, philosophy, ethics, and environment in a holistic manner.

In addition, the integration of IKS encourages reflective practice and critical thinking among teachers. It helps them analyse their teaching methods and continuously improve their professional skills.

IKS also offers opportunities for curriculum innovation and development, allowing teacher education institutions to design culturally relevant and context-specific learning materials.

Moreover, it promotes inclusive and sustainable education, emphasizing harmony with nature, social responsibility, and community engagement.

Finally, IKS facilitates the development of professionally competent and ethically grounded teachers who can contribute effectively to both academic excellence and character formation. Thus, integrating IKS into teacher education opens wide possibilities for creating a balanced, meaningful, and future-ready education system.

12. CHALLENGES IN INTEGRATING IKS INTO TEACHER EDUCATION

1. Lack of trained faculty in Indian Knowledge Systems (IKS).
2. Limited availability of structured and standardized IKS curriculum.
3. Dominance of Western pedagogical models in teacher education.
4. Insufficient awareness about the importance of IKS among educators.
5. Language barriers in understanding ancient texts and scriptures.
6. Lack of research and documented teaching resources on IKS.
7. Resistance to change in existing teacher education institutions.
8. Difficulty in blending traditional knowledge with modern pedagogy.
9. Inadequate institutional support and funding for IKS integration.
10. Gap between theoretical understanding and practical classroom application.

13. ROLE OF NEP 2020 IN PROMOTING IKS

The National Education Policy (NEP) 2020 plays a transformative role in promoting Indian Knowledge Systems (IKS) within the Indian education system. It recognizes India's rich

intellectual and cultural heritage and emphasizes the need to integrate traditional knowledge with modern education to create a holistic and multidisciplinary learning environment.

One of the key contributions of NEP 2020 is the formal inclusion of IKS in the curriculum at all levels of education. The policy encourages the study of Indian philosophy, art, literature, science, mathematics, and traditional practices such as yoga, Ayurveda, and indigenous ecological knowledge. This integration helps learners develop a deeper understanding of India's knowledge traditions.

NEP 2020 also emphasizes multidisciplinary and experiential learning, which aligns closely with the principles of IKS. It promotes learning through real-life experiences, critical thinking, and practical application of knowledge, reflecting traditional Indian pedagogical approaches.

In teacher education, NEP 2020 highlights the importance of preparing educators who are culturally rooted and professionally competent. It encourages teacher training institutions to incorporate IKS-based content, pedagogy, and research into their programs. This helps teachers develop value-based, reflective, and context-sensitive teaching practices.

Furthermore, NEP 2020 promotes the use of technology and digital platforms to document, preserve, and disseminate Indian traditional knowledge systems. It also supports the development of research centers and academic collaboration in IKS.

Thus, NEP 2020 acts as a bridge between traditional wisdom and modern education. By integrating IKS into mainstream education, it aims to create a balanced, inclusive, and culturally enriched education system that fosters both academic excellence and ethical development among learners.

14. STRATEGIES FOR EFFECTIVE INTEGRATION

1. Integrate IKS concepts into the teacher education curriculum systematically.
2. Provide specialized training programs for teacher educators on IKS.
3. Develop multidisciplinary courses combining modern pedagogy and IKS.
4. Use experiential learning methods such as case studies and field activities.
5. Encourage research and documentation of Indian Knowledge Systems.
6. Develop digital resources and e-content on IKS for easy access.
7. Promote collaboration between universities and traditional knowledge experts.
8. Organize workshops, seminars, and FDPs on IKS-based teaching.
9. Include IKS-based assessments and reflective learning activities.
10. Align integration strategies with NEP 2020 policy guidelines.

15. CONCLUSION

The integration of Indian Knowledge Systems (IKS) into teacher education represents a significant step toward developing a balanced, culturally rooted, and holistic education system in India. IKS, with its rich philosophical, ethical, and pedagogical traditions, offers valuable insights for modern teacher preparation programs. It emphasizes values such as truth, non-violence, discipline, respect, and holistic development, which are essential for shaping effective and responsible educators.

This study highlights that teacher education cannot be limited to the development of technical teaching skills alone; it must also focus on the formation of ethical, reflective, and socially responsible teachers. The traditional Indian educational systems, especially the Gurukul model, demonstrate the importance of mentorship, experiential learning, and value-based instruction, which remain highly relevant in contemporary contexts.

The analysis also shows that NEP 2020 provides a strong policy framework for integrating IKS into teacher education. It encourages multidisciplinary learning, experiential pedagogy, and the inclusion of indigenous knowledge systems, thereby bridging the gap between traditional wisdom and modern educational practices. However, successful implementation requires overcoming several challenges such as lack of trained faculty, limited resources, and insufficient curriculum integration.

Despite these challenges, the opportunities offered by IKS integration are significant. It can enhance teacher competence, strengthen cultural identity, promote ethical teaching practices, and improve the overall quality of education. Teachers trained with IKS perspectives are better equipped to connect learning with real-life experiences and foster holistic student development.

In conclusion, integrating Indian Knowledge Systems into teacher education is not only an academic reform but also a cultural and philosophical necessity. It ensures that education becomes more meaningful, value-oriented, and socially relevant. By combining traditional wisdom with modern pedagogical approaches, India can develop a teacher education system that nurtures competent, compassionate, and ethically grounded educators capable of contributing to both national development and global understanding.

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