

## ROLE OF TEACHER EDUCATION IN THE PROMOTION OF INDIAN KNOWLEDGE SYSTEM

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### Abstract:

*The Indian Knowledge System (IKS) is a vast repository of ancient wisdom, spanning fields such as mathematics, science, philosophy, and governance. The National Education Policy (NEP) 2020 highlights the importance of integrating IKS into modern education, calling for a transformative approach to teacher education. This paper explores how teacher education can promote IKS, focusing on curriculum design, teaching methods, and the alignment of traditional knowledge with contemporary educational practices. By examining the historical roots of IKS and its relevance today, the study offers practical insights for educators, policymakers, and curriculum designers to create a holistic and culturally rooted education system.*

**Keywords:** *Indian Knowledge System (IKS), Teacher Education, National Education Policy (NEP) 2020, Teaching Methods, Curriculum Development, Cultural Heritage*

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### Introduction:

The Indian knowledge system (IKS) will provide a transformative journey into the depths of ancient Indian wisdom and its connection to the National Education Policy (NEP) 2020. The National Education Policy (NEP) 2020 served as a guiding framework emphasizing holistic learning, flexibility, technology integration, teacher empowerment, and the recognition of indigenous knowledge and cultural heritage. These aspects collectively form the foundation for a transformative education system that prepares students for the complexities of the 21st century. Through this paper one can gain valuable insights, discover key learnings, and may encounter intriguing questions that continue to shape understanding of education and the vast reservoir of knowledge India possesses especially in The Education. The National Education Policy (NEP) 2020 served as a guiding framework for the same.

The Indian Knowledge System (IKS) is a rich legac of ancient wisdom that has shaped India's intellectual and cultural identity for thousands of years. From Aryabhata's groundbreaking contributions to mathematics to the profound philosophical teachings of the Upanishads, IKS offers a holistic approach to learning that remains relevant even in today's fast-paced world. The National Education Policy (NEP) 2020 recognizes the value of integrating IKS into modern education, emphasizing the need for a curriculum that is deeply rooted in India's cultural heritage while being innovative and globally relevant.

Teacher education plays a critical role in this transformation. Teachers are the bridge between ancient wisdom and modern learners, responsible for imparting knowledge, shaping minds, and fostering an appreciation for India's rich intellectual traditions. This paper examines how teacher education can promote IKS, focusing on curriculum design, teaching strategies, and the challenges of blending traditional knowledge with contemporary education.

### **The Need for Integrating IKS in Teacher Education:**

#### **A. Historical and Philosophical Foundations :**

The Indian Knowledge System is deeply rooted in ancient texts like the Vedas, Upanishads, and Bhagavad Gita, which offer timeless insights into ethics, spirituality, and human nature. These texts also contain significant contributions to fields such as mathematics, astronomy, and medicine, which are still relevant today. Integrating IKS into teacher education ensures that future educators are well-versed in these traditions and can pass on this knowledge to their students.

#### **B. Alignment with NEP 2020 :**

The NEP 2020 envisions an education system that is holistic, flexible, and deeply connected to India's cultural heritage. It emphasizes interdisciplinary learning, experiential education, and the inclusion of Indian knowledge systems in the curriculum. Teacher education programs must align with these goals to prepare educators who can effectively implement the NEP's vision.

#### **C. Promoting Cultural Identity and Inclusivity :**

Incorporating IKS into teacher education fosters a sense of cultural identity and pride among students. It also promotes inclusivity by recognizing and valuing the diverse cultural backgrounds of learners. Teachers trained in IKS can create classrooms that celebrate India's rich heritage while preparing students for the challenges of a globalized world.

### **Curriculum Development for Teacher Education in IKS:**

#### **A. Foundations of Indian Knowledge System :**

- Introduction to IKS: Understanding the historical and philosophical foundations of IKS, including key texts and contributions from ancient scholars.
- Integration with NEP 2020: Aligning teacher education curricula with the goals and principles of NEP 2020, emphasizing holistic development and interdisciplinary learning.

#### **B. Teaching Methods Rooted in IKS :**

- Traditional Teaching Methods: Exploring traditional Indian teaching methods such as the Gurukul system, storytelling, and experiential learning.
- Experiential and Inquiry-Based Learning: Incorporating hands-on activities, problem-solving exercises, and practical applications to deepen understanding.
- Use of Technology: Leveraging digital tools and resources to enhance the teaching and learning of IKS concepts.

### C. Contemporary Challenges and Reforms :

- Inclusive Education: Developing strategies to cater to diverse learners, including those from marginalized communities.
- Professional Development: Providing continuous professional development opportunities for teachers to stay updated on emerging trends and best practices in IKS education.
- Assessment and Evaluation: Designing assessment strategies that align with the principles of IKS, focusing on holistic development rather than rote learning.

### Role of Teachers in Promoting IKS :

#### A. Curriculum Implementation :

Teachers play a crucial role in implementing IKS-based curricula in schools. They must be trained to integrate traditional knowledge with modern educational practices, ensuring that students receive a well-rounded education.

#### B. Fostering Cultural Awareness :

Teachers can foster cultural awareness by incorporating IKS concepts into their lessons. For example, teaching mathematics through the lens of ancient Indian contributions or using storytelling to convey philosophical ideas.

#### C. Encouraging Critical Thinking and Innovation :

IKS encourages critical thinking and innovation by emphasizing experiential learning and problem-solving. Teachers trained in IKS can inspire students to think creatively and apply their knowledge to real-world challenges.

### Indicators of the Teacher Education Curriculum Development:

- 1. Alignment with educational standards:** The curriculum should align with national and international standards, ensuring that teachers are equipped to meet the desired learning outcomes.
- 2. Incorporation of pedagogical approaches:** The curriculum should emphasize a variety of effective pedagogical approaches, including inquiry-based learning, problem solving strategies, and technology integration, to enhance the teaching and learning experience.
- 3. Cultural relevance and contextualization:** The curriculum should incorporate examples, problems and teaching methods that are culturally relevant and resonate with the diverse backgrounds of students, ensuring inclusivity.
- 4. Integration of real-world application:** The concepts should be linked to real world applications, demonstrating their practical relevance and helping teachers connect theoretical knowledge with everyday experiences.
- 5. Assessment strategies:** The curriculum should provide guidance on effective assessment strategies, including formative and summative assessments, to evaluate students' understanding and inform instructional decisions.

6. **Professional development:** opportunities ongoing professional development opportunities should be embedded in the curriculum, allowing teachers to continually enhance their content knowledge, pedagogical skills, and awareness of emerging educational trends.
7. **Use of technology:** The curriculum should incorporate the use of technology to enhance mathematical understanding, providing teachers with training on integrating digital tools and resources into their instructional practices.
8. **Collaborative:** learning and communities of practice Encouraging collaboration among teachers through communities of practice fosters the sharing of best practices, resources and experiences contributing to the ongoing improvement of education.
9. **Feedback mechanisms:** The curriculum development process should include mechanisms for collecting feedback from teachers, students and other stakeholders to ensure continuous improvement and responsiveness to evolving educational needs.
10. **Research-informed practices:** The curriculum should encourage teachers to engage with research in the education, promoting evidence-based practices and a commitment to staying informed about advancements in the field. -Journal for Research in Education (JRE) Monitoring these indicators will contribute to the development of robust curriculum at the teacher education level to enhance quality of instruction and promoting meaningful learning experience for students.

#### **The National Education Policy (NEP) 2020:**

NEP 2020 in India envisions a comprehensive and transformative approach to education, including the education at the teacher education level. Some key points related to the education in the NEP 2020 are

1. **Interdisciplinary Approach:** The NEP emphasizes an interdisciplinary approach to education, encouraging the integration of subjects. This approach extends to fostering connections with other disciplines and real-world applications.
2. **Early Childhood Approach:** The NEP recognizes the importance of foundational learning, including numeracy and basic mathematical concepts, in early childhood education. Teacher education programs are expected to incorporate effective methods for teaching different subjects to young learners.
3. **Holistic Development:** The policy aims to promote holistic development, including cognitive and critical thinking skills through the education. Teacher education programs are encouraged to focus on pedagogies that enhance problem-solving abilities and analytical thinking.
4. **Professional Development of Teachers:** The NEP emphasizes the continuous professional development of teachers. In the context of the education, this involves providing teachers with opportunities to enhance their content knowledge, pedagogical skills, and the use of technology in teaching.
5. **Inclusion of Indian Knowledge Systems:** The NEP underscores the integration of traditional Indian knowledge systems into the curriculum. In the context of the education, this could involve drawing upon historical Indian contributions in incorporating cultural contexts into the teaching of mathematical concepts.

**6. Focus on Experiential Learning:** The NEP advocates for a shift from rote learning to experiential learning. This implies a move towards hands-on activities, problem-solving exercises, and practical applications to deepen understanding.

**7. Flexibility and Choice:** The policy encourages flexibility and choice in education. At the teacher education level, this may allow aspiring teachers to choose specialized courses or modules related to the education, catering to their interests and career goals.

**8. Technology Integration:** The NEP acknowledges the role of technology in education. In the education, teachers are encouraged to leverage digital tools and resources to enhance the learning experience and make Education more accessible and engaging.

It's important to note that the effective implementation of these principles outlined in the NEP 2020 depends on the actions taken by educational institutions, policymakers, and teacher education programs across the country.

#### **Challenges and Recommendations :**

##### **A. Challenges:**

1. Lack of Awareness: Many educators and policymakers are unaware of the depth and relevance of IKS.
2. Resistance to Change: Integrating IKS into mainstream education may face resistance from those accustomed to traditional teaching methods.
3. Resource Constraints: Developing and implementing IKS-based curricula requires significant resources, including trained educators and instructional materials.

##### **B. Recommendations :**

1. Teacher Training Programs: Develop specialized training programs for teachers to familiarize them with IKS concepts and teaching methods.
2. Curriculum Integration: Integrate IKS into existing teacher education curricula, ensuring that it is a core component rather than an add-on.
3. Collaborative Efforts: Encourage collaboration between educational institutions, policymakers, and cultural organizations to promote IKS in education.
4. Research and Development: Invest in research to explore the practical applications of IKS in modern education and develop evidence-based teaching strategies.

#### **Conclusion :**

Integrating the Indian Knowledge System into teacher education is essential for creating a culturally rooted, holistic, and forward-looking education system. By equipping teachers with the knowledge and skills to promote IKS, we can ensure that future generations appreciate and preserve India's rich intellectual heritage while thriving in a globalized world. The NEP 2020 provides a strong framework for this transformation, but its success depends on the collective efforts of educators, policymakers, and stakeholders. As we move forward, it is imperative to strike a balance between tradition and innovation, ensuring that IKS remains a vibrant and relevant part of India's educational landscape.



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