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## **Transforming Teacher Education through the Integration of Indian Knowledge Systems: Insights from NEP 2020 and UGC Guidelines**

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### **Abstract**

*The integration of the Indian Knowledge System (IKS) into teacher education, as envisioned by the National Education Policy (NEP) 2020 and guided by the University Grants Commission (UGC) guidelines, aims to transform India's educational landscape. NEP 2020 emphasizes a holistic and multidisciplinary approach, promoting cultural heritage, inclusion of local contexts, and the use of mother tongue in instruction. It also highlights the importance of research and teacher training in IKS. The UGC guidelines support the establishment of IKS centers, interdisciplinary curriculum integration, faculty development, and collaboration with traditional knowledge practitioners.*

*This article explores how the integration of IKS can enhance teacher education, focusing on curriculum design, pedagogical practices, cultural competence, interdisciplinary teaching, research and innovation, and continuous professional development. By embedding traditional wisdom and cultural heritage into modern educational practices, teacher education programs can provide a more holistic, inclusive, and engaging learning experience for students. The article argues that incorporating IKS into teacher education will enrich educational content, foster a deeper appreciation of India's cultural heritage, and prepare educators to meet diverse student needs, aligning with the broader goals of NEP 2020 for an inclusive and culturally responsive education system.*

**Key-words:** *National Education Policy 2020 (NEP 2020), Indian Knowledge System (IKS), Teacher Education, Pedagogical Practices, Curriculum Integration, Holistic Education, Cultural Heritage, Multidisciplinary Approach, Local Contexts, Research and Development, Mother Tongue Instruction, Teacher Training and Development, Experiential Learning, Interdisciplinary Teaching, Cultural Competence etc.*

### **Introduction**

The National Education Policy (NEP) 2020, introduced by the Government of India, aims to transform the educational landscape of the country. One of the key highlights of NEP 2020 is the emphasis on the Indian Knowledge System (IKS), which encompasses traditional wisdom, scientific insights, and cultural practices developed over millennia. The University Grants Commission (UGC) has provided guidelines to integrate IKS into the curriculum, emphasizing its relevance in modern education. This article explores the key points of NEP 2020 and the UGC guidelines on IKS, focusing on their implications for teacher education.

### **NEP 2020 on Indian Knowledge System**

**1. Holistic and Multidisciplinary Education:** NEP 2020 advocates for a holistic and multidisciplinary approach to education, which includes the integration of IKS. This approach aims to provide students with a broad-based education that incorporates traditional knowledge and contemporary subjects. By combining modern and traditional knowledge systems, educators can create a comprehensive learning environment that is both culturally rich and intellectually stimulating.

**2. Promoting Cultural Heritage:** One of the primary goals of NEP 2020 is to promote and preserve India's rich cultural heritage. The policy encourages the inclusion of IKS in the curriculum to help students appreciate and understand the cultural and historical context of their education. This not only fosters a sense of pride and identity among students but also ensures that traditional knowledge is preserved and passed on to future generations.

**3. Inclusion of Local Contexts:** NEP 2020 emphasizes the importance of including local and regional knowledge systems in the curriculum. This includes the diverse traditions, languages, and practices from different parts of India, thus promoting a more inclusive and context-specific education. By doing so, the policy aims to make education more relevant and relatable to students from various backgrounds, enhancing their engagement and learning outcomes.

**4. Research and Development:** The policy encourages research and development in IKS. Institutions are urged to establish dedicated centers for the study and research of traditional knowledge systems, which can contribute to the global body of knowledge. This focus on research not only validates and strengthens IKS but also provides new insights and methodologies that can enhance modern educational practices.

**5. Use of Mother Tongue:** NEP 2020 advocates for the use of the mother tongue or local language as the medium of instruction, especially in the early years of education. This approach is seen as essential for effectively transmitting IKS to students. Learning in their native language helps students grasp complex concepts more easily and fosters a deeper connection with their cultural heritage.

**6. Teacher Training and Development:** The policy highlights the need for robust teacher training programs that include components on IKS. Teachers need to be well-versed in traditional knowledge systems to effectively integrate them into their teaching practices. By equipping teachers with the necessary knowledge and skills, the policy ensures that they can deliver a culturally enriched education that resonates with students.

**7. Curriculum and Pedagogy:** NEP 2020 calls for the development of curricula that integrate IKS across various subjects. This integration should be reflected in pedagogical practices that promote experiential and holistic learning. By incorporating traditional knowledge into the curriculum, educators can provide a more well-rounded education that values both modern and ancient wisdom.

#### UGC Guidelines on Indian Knowledge System

The UGC has issued specific guidelines to facilitate the integration of IKS into higher education. These guidelines include:

**1. Establishment of IKS Centers:** Universities and colleges are encouraged to establish dedicated centers for the study and promotion of IKS. These centers should focus on research, documentation, and dissemination of traditional knowledge. By creating such centers, institutions can provide a focal point for

the study and preservation of IKS, ensuring its continued relevance and application.

**2. Incorporation into Curriculum:** The UGC recommends incorporating IKS into the curriculum across disciplines. This can include modules on traditional sciences, literature, philosophy, and art, ensuring that students receive a well-rounded education that includes IKS. By integrating IKS into various subjects, educators can provide a more comprehensive and culturally rich learning experience.

**3. Interdisciplinary Approach:** The guidelines emphasize an interdisciplinary approach to integrating IKS. Subjects like mathematics, physics, and biology should include traditional Indian perspectives and contributions. This approach not only enriches the curriculum but also demonstrates the interconnectedness of knowledge systems, fostering a deeper understanding and appreciation of IKS among students.

**4. Faculty Development Programs:** The UGC stresses the importance of faculty development programs to train teachers in IKS. These programs should equip teachers with the knowledge and skills needed to effectively teach IKS. By investing in faculty development, institutions can ensure that their educators are well-prepared to integrate IKS into their teaching practices.

**5. Collaboration with Traditional Knowledge Practitioners:** The UGC encourages collaboration between academic institutions and traditional knowledge practitioners. This collaboration can provide students with firsthand experience and insights into traditional practices. By engaging with traditional practitioners, students can gain a deeper understanding of IKS and its practical applications.

**6. Research and Innovation:** The guidelines promote research and innovation in IKS. Institutions are encouraged to undertake research projects that explore and validate traditional knowledge systems. This focus on research not only strengthens IKS but also provides new methodologies and insights that can enhance modern educational practices.

#### Implications for Teacher Education

The integration of IKS into teacher education has significant implications for the development of a holistic and culturally responsive educational system. Here are the key areas where IKS can impact teacher education:

**1. Curriculum Design:** Teacher education programs need to incorporate IKS into their curriculum. This includes designing courses that cover the history, philosophy, and applications of traditional knowledge systems. By understanding IKS, future teachers can appreciate the value of integrating traditional knowledge into their teaching practices. This holistic approach to curriculum design ensures that educators are well-versed in both modern and traditional knowledge systems.

**2. Pedagogical Practices:** The integration of IKS into teacher education can lead to the adoption of

pedagogical practices that emphasize experiential learning, critical thinking, and holistic development. Traditional knowledge systems often involve hands-on learning and practical applications, which can be incorporated into modern pedagogical methods. By adopting these practices, educators can create a more engaging and effective learning environment.

**3. Cultural Competence:** Training in IKS can enhance teachers' cultural competence. Educators who understand and appreciate traditional knowledge systems can create a more inclusive classroom environment that respects and values cultural diversity. This cultural competence is essential for fostering a sense of identity and belonging among students. By promoting cultural competence, teacher education programs can ensure that educators are well-prepared to meet the diverse needs of their students.

**4. Interdisciplinary Teaching:** IKS encourages an interdisciplinary approach to education. Teacher education programs can train educators to integrate knowledge from various disciplines, promoting a more comprehensive and interconnected understanding of subjects. This approach aligns with the holistic vision of NEP 2020 and ensures that educators are well-prepared to teach in a way that reflects the interconnectedness of knowledge systems.

**5. Research and Innovation:** Teacher education programs should encourage research and innovation in IKS. By engaging in research projects that explore traditional knowledge systems, future teachers can contribute to the validation and revitalization of IKS. This research can also provide new insights and methodologies for modern education. By promoting research and innovation, teacher education programs can ensure that educators are well-prepared to integrate IKS into their teaching practices.

**6. Professional Development:** Ongoing professional development programs are crucial for teachers to stay updated on IKS and its applications. These programs can provide teachers with the latest research, tools, and techniques for integrating IKS into their teaching practices. Continuous learning ensures that teachers remain effective and relevant in their roles. By investing in professional development, institutions can ensure that their educators are well-prepared to integrate IKS into their teaching practices.

**7. Use of Local Languages:** Training teachers to use local languages for instruction can enhance the transmission of IKS. Educators who are proficient in the mother tongue can more effectively communicate traditional knowledge to students, making the learning experience more relatable and impactful. By promoting the use of local languages, teacher education programs can ensure that educators are well-prepared to integrate IKS into their teaching practices.

**8. Engagement with Communities:** Teacher education programs should encourage future educators to engage with local communities and traditional knowledge practitioners. This engagement can provide valuable insights and practical experience, enriching the educational process. Teachers can learn directly from those who possess traditional knowledge, ensuring its

accurate and respectful transmission. By promoting community engagement, teacher education programs can ensure that educators are well-prepared to integrate IKS into their teaching practices.

**9. Assessment Methods:** The integration of IKS requires the development of new assessment methods that capture the holistic and experiential nature of traditional learning.

Teacher education programs should train educators to use diverse assessment tools that go beyond standard testing, incorporating observations, practical applications, and student reflections. By developing new assessment methods, teacher education programs can ensure that educators are well-prepared to integrate IKS into their teaching practices.

#### **The integration of the Indian Knowledge System into teacher education:-**

The integration of the Indian Knowledge System into teacher education, as envisioned by NEP 2020 and guided by UGC recommendations, holds the potential to transform the educational landscape of India. By embedding traditional wisdom and cultural heritage into modern educational practices, teachers can provide a more holistic, inclusive, and engaging learning experience for students.

Teacher education programs must adapt to include IKS in their curriculum, pedagogical practices, and professional development initiatives. This integration will not only enrich the educational content but also foster a deeper appreciation of India's rich cultural heritage among educators and students alike.

By preparing teachers to effectively incorporate IKS into their teaching, we can ensure that the next generation of learners benefits from a comprehensive education that honors the past while preparing them for the future. This approach aligns with the broader goals of NEP 2020, promoting a more inclusive, equitable, and culturally responsive education system in India.

The relationship between IKS and teacher education is complex and deeply rooted in India's cultural and philosophical traditions. By understanding this interconnection, educators can appreciate how ancient wisdom and modern pedagogical practices can coalesce to enhance teaching methodologies. The Indian Knowledge System, with its emphasis on holistic learning, experiential practices, and moral education, offers a rich framework that can be integrated into contemporary teaching strategies.

Integrating IKS into teacher education involves understanding how traditional knowledge systems can inform and enhance modern pedagogical practices. This understanding can lead to the development of teaching methodologies that are not only innovative but also culturally relevant and resonant with students' backgrounds.

One of the pivotal goals of integrating IKS into teacher education is to enhance teachers' awareness of this system and its significance. Educators equipped with a deeper understanding of IKS can convey its importance

to students, fostering a culturally enriched learning environment. Strategies to enhance this awareness include professional development programs, workshops, and inclusion of IKS-related content in teacher training curricula.

Awareness can be fostered through comprehensive training programs that highlight the significance of IKS and its applications in modern education. Educators can be trained to incorporate traditional knowledge into their teaching practices, creating a more engaging and culturally responsive learning environment.

B.Ed students need to be proficient in integrating IKS principles into their lesson plans to foster a holistic and culturally rooted educational approach. Effective lesson planning that incorporates IKS can provide students with a well-rounded education that respects and acknowledges their cultural heritage.

Incorporating IKS into lesson plans involves identifying relevant aspects of traditional knowledge that align with modern educational objectives. For example, ancient Indian texts on mathematics and astronomy can be used to teach contemporary STEM subjects. This not only makes the lessons more interesting but also highlights the historical contributions of Indian scholars to global knowledge.

Practical methods for integrating IKS into lesson plans include using traditional stories and examples to illustrate scientific concepts, incorporating traditional arts and crafts into creative projects, and using historical texts to teach critical thinking and analytical skills. By doing so, educators can create lessons that are both informative and culturally resonant, providing a richer educational experience for their students.

Continuous professional development is essential for educators to stay abreast of evolving perspectives on IKS and its relevance to contemporary education. Professional development programs can provide educators with the knowledge and tools needed to integrate IKS into their teaching practices effectively.

Professional development programs can include workshops, seminars, and courses focused on IKS and its applications in modern education. These programs can help educators develop a deeper understanding of traditional knowledge and its relevance to contemporary teaching practices. Additionally, ongoing professional development can ensure that educators remain current with new research and developments in the field of IKS.

By participating in professional development programs, educators can continuously refine their teaching practices, stay current with educational advancements, and integrate culturally significant knowledge into their curriculum. This ensures that their teaching methods remain effective and relevant in a constantly evolving educational landscape.

Developing a culturally enriched skill set is crucial for educators aiming to incorporate IKS into their teaching practices. This skill set includes a deep understanding of cultural heritage, the ability to relate traditional knowledge to contemporary subjects, and the capability

to create an inclusive and diverse classroom environment.

Educators can develop a culturally enriched skill set by participating in training programs that focus on cultural competence and the integration of traditional knowledge into modern teaching practices. These programs can provide educators with the skills and knowledge needed to create a learning environment that values and respects cultural diversity. This not only enhances the educational experience but also fosters a sense of belonging and identity among students.

By developing a culturally enriched skill set, educators can create a more inclusive and diverse classroom atmosphere. This promotes a deeper understanding and appreciation of cultural perspectives among students, enriching the educational experience for all.

Integrating IKS into STEM education can enhance the relevance and cultural sensitivity of these subjects. The Indian Knowledge System, with its rich contributions to fields like mathematics, astronomy, and medicine, offers a wealth of resources that can be integrated into STEM curricula.

Practical methods for integrating IKS into STEM education include using historical texts and traditional practices to teach scientific concepts, incorporating traditional knowledge into laboratory experiments, and using examples from IKS to illustrate modern scientific principles. This approach not only makes STEM subjects more interesting and relatable but also highlights the historical significance of Indian contributions to these fields.

By integrating IKS into STEM education, educators can provide students with a more comprehensive understanding of these subjects. This fosters a sense of pride in their cultural heritage and encourages a more inclusive approach to scientific learning.

Developing cultural competence is essential for educators aiming to navigate and incorporate IKS into their teaching practices. This competence involves understanding and appreciating diverse cultural perspectives, creating an inclusive classroom environment, and fostering a deeper connection between students and their cultural heritage.

Educators can develop cultural competence by participating in training programs that focus on cultural awareness and the integration of traditional knowledge into modern teaching practices. These programs can help educators understand the significance of IKS and its applications in contemporary education. By developing cultural competence, educators can create a learning environment that values and respects cultural diversity.

Cultural competence development promotes a deeper understanding and appreciation of diverse cultural perspectives among students. This not only enhances the educational experience but also fosters a sense of belonging and identity among students.

Assessing the impact of incorporating IKS into teacher education is crucial for ongoing evaluation and

refinement of teaching practices. Effective assessment tools can help educators understand the benefits of integrating traditional knowledge into the curriculum and identify areas for improvement.

Assessment strategies for evaluating the effectiveness of integrating IKS into teacher education include qualitative assessments, student feedback, and performance evaluations. These tools can provide valuable insights into the impact of IKS on student learning and engagement. By using these tools, educators can continuously refine their teaching practices to ensure they remain effective and relevant in a constantly evolving educational landscape.

The integration of the Indian Knowledge System into teacher education has the potential to transform pedagogical practices, making them more holistic, culturally resonant, and inclusive. By establishing the interconnection, fostering awareness, integrating traditional knowledge into lesson planning, and promoting continuous professional development, educators can create a richer, more diverse learning environment.

This article highlights the importance of cultural competence and the need for ongoing assessment to ensure effective teaching practices. As educators continue to explore the integration of IKS into their teaching practices, it is essential to recognize the value of this traditional knowledge and its relevance to contemporary education.

By doing so, educators can create an educational experience that honors the past while preparing students for the future, fostering a generation of learners who are both knowledgeable and culturally competent.

This approach aligns with the broader goals of NEP 2020, promoting a more inclusive, equitable, and culturally responsive education system in India.

## Conclusion

The integration of the Indian Knowledge System (IKS) into teacher education, as envisioned by NEP 2020 and guided by UGC recommendations, holds the potential to transform the educational landscape of India. By embedding traditional wisdom and cultural heritage into modern educational practices, teachers can provide a more holistic, inclusive, and engaging learning experience for students.

Teacher education programs must adapt to include IKS in their curriculum, pedagogical practices, and professional development initiatives. This integration will not only enrich the educational content but also foster a deeper appreciation of India's rich cultural heritage among educators and students alike.

By preparing teachers to effectively incorporate IKS into their teaching, we can ensure that the next generation of learners benefits from a comprehensive education that honors the past while preparing them for the future. This approach aligns with the broader goals of NEP 2020, promoting a more inclusive, equitable, and culturally responsive education system in India.

The relationship between IKS and teacher education is complex and deeply rooted in India's cultural and philosophical traditions. By understanding this interconnection, educators can appreciate how ancient wisdom and modern pedagogical practices can coalesce to enhance teaching methodologies. The Indian Knowledge System, with its emphasis on holistic learning, experiential practices, and moral education, offers a rich framework that can be integrated into contemporary teaching strategies.

Integrating IKS into teacher education involves understanding how traditional knowledge systems can inform and enhance modern pedagogical practices. This understanding can lead to the development of teaching methodologies that are not only innovative but also culturally relevant and resonant with students' backgrounds.

One of the pivotal goals of integrating IKS into teacher education is to enhance teachers' awareness of this system and its significance. Educators equipped with a deeper understanding of IKS can convey its importance to students, fostering a culturally enriched learning environment. Strategies to enhance this awareness include professional development programs, workshops, and inclusion of IKS-related content in teacher training curricula.

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Incorporating IKS into lesson plans involves identifying relevant aspects of traditional knowledge that align with modern educational objectives. For example, ancient Indian texts on mathematics and astronomy can be used to teach contemporary STEM subjects. This not only makes the lessons more interesting but also highlights the historical contributions of Indian scholars to global knowledge.

Continuous professional development is essential for educators to stay abreast of evolving perspectives on IKS and its relevance to contemporary education. Professional development programs can provide educators with the knowledge and tools needed to integrate IKS into their teaching practices effectively.

Developing a culturally enriched skill set is crucial for educators aiming to incorporate IKS into their teaching practices. This skill set includes a deep understanding of cultural heritage, the ability to relate traditional knowledge to contemporary subjects, and the capability to create an inclusive and diverse classroom environment.

Integrating IKS into STEM education can enhance the relevance and cultural sensitivity of these subjects. The Indian Knowledge System, with its rich contributions to fields like mathematics, astronomy, and medicine, offers a wealth of resources that can be integrated into STEM curricula.

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This approach aligns with the broader goals of NEP 2020, promoting a more inclusive, equitable, and culturally responsive education system in India.

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