
Integrating the Indian Knowledge System into Education through NEP-2020: Challenges, Opportunities and Strategies

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ABSTRACT

For a long time, our education system has been operating according to the traditional ways. Since the second policy on education, i.e., the NEP, which came in 1986, we have been following its suggestions. Any education system that does not accept the changes and the development occurring in the world can not make progress and survive for a long time and also can not fulfill the needs of the population. Now, the NEP 2020, which was launched by the central government, is a milestone in the field of education because it focuses on every aspect of education and also discusses all the levels of school education like foundation, preparatory, middle, secondary, and higher education levels. This policy acknowledges the need for promoting and conserving India's rich heritage of knowledge, especially spiritual, philosophical, historical, social, cultural, ethical, and medicinal knowledge-based legacy, adopting along with innovative global teaching methods. 'Old is Gold'—this proverb aptly fits our Indian Knowledge System (IKS). The NEP 2020 wants to collaborate the old Indian knowledge system with the modern knowledge system by applying different types of strategies, like a multidisciplinary



approach, to promote critical thinking and all-round development of students. The NEP-2020 encourages the development of Indian ancient languages and cultural studies among students, which will help them to understand their heritage while interacting with global knowledge. This paradigm shift is intended to boost the quality of education, to make students responsible citizens, and to make them aware of their identities. The policy plays the role of a catalyst for revising the curriculum and teaching methods as a first step toward a more flexible, inclusive, and versatile educational system, ultimately aiming for a more integrated and purposeful learning experience for all.

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Introduction

The NEP-2020 has a significant attempt towards rediscovering our heritage, i.e., the Indian knowledge system (IKS), into the Indian education system. It makes an effort to transform the education system of India by incorporating invaluable traditional approaches to teaching and learning, such as from the Vedas, Upanishads, and other Indian philosophical texts, into the syllabus. By assimilating the content of these sacred texts, students will get a more comprehensive education that reinvents the valuable heritage of India. Moreover, NEP-2020 cultivates imagination, creativity, critical thinking, problem-solving, and brainstorming abilities among students.

Indian education has confronted the associated challenges of preserving conventional knowledge while adapting a new pedagogical framework. The National Education Policy aims to resolve such issues by promoting a flexible curriculum-based education to India's diverse cultural heritage, emphasizing a multidisciplinary approach to local knowledge and indigenous practices. This effort is essential for encouraging students to use their diverse abilities, along with helping students build a sense of identity and cultural community by focusing on the prudence contained in traditional Indian knowledge systems. Teaching our indigenous knowledge in school is important to prepare future generations for modern educational challenges. The NEP 2020 focuses on a balanced education between global competencies and local cultural knowledge. Its goal is to make all-round development of students who can succeed and make a positive impact in an interconnected world. This paper aims to explore how this change in approach proves to be effective and also highlights the relevance of traditional knowledge in building a fair and sustainable future for India.

In this paper, the significance of the Indian knowledge system (IKS) has been discussed, and also its strategies have been pointed out to bring reform to our education system, which can be brought about



through this IKS. Our old knowledge has a deep and diverse cultural heritage and a wealth of indigenous knowledge systems that have been shared and preserved over many generations. In the recent past, some educational institutions often ignored and did not appreciate the Indian knowledge system. This negligence creates a gap between the education system and the country's cultural heritage.

Literature Review:

Education that incorporates Indian Knowledge Systems (IKS) can prove to be a remarkable change in the Indian education system. It helps preserve and revive India's rich heritage, encourages a multidisciplinary approach, and promotes critical and creative thinking along with problem-solving abilities. Such efforts empower the nation (Suresh, 2024). Another important piece of research shows that the National Education Policy 2020 encourages schools, colleges, and universities to develop curriculum frameworks that include Indian Knowledge Systems. This makes education more fruitful for the students and helps them connect past knowledge with today's world (Kumar et al., 2024; Sudhakar, 2024). As Bhat (2024) points out, including relevant education of the past is crucial because it gives students learning experiences that can truly transform their lives. The teachers should use different teaching methods that incorporate IKS with modern education. Due to this initiative students understand and value their culture, roots, and heritage (Bhardwaj et al., 2024). IKS focuses on learning by doing and the problem-solving approach that helps students explore ideas, ask questions and build their thinking.

Significance of Integrating IKS in Education:

It is important to include the Indian knowledge system (IKS) that has developed through three important elements: experience, observation, and experimentation. It will actively engage the learning community in spreading the rich heritage of our country and traditional knowledge in the field of education. As our schools, colleges, and universities transact the curriculum, so we have to make sure that precious knowledge of our IKS is preserved and shared with the next generation through these agencies. IKS focuses on the all-around growth of students, covering not just cognitive abilities and skills but also developing emotional, social, and spiritual well-being. This balanced approach can help students' emotional health and all-around development. By integrating IKS into our education, we can make our education more relevant, fruitful, meaningful, and empathetic for students. It also helps them have a stronger sense of identity and belonging. IKS encourages creative thinking and problem-solving abilities more effectively. By studying and understanding this system of knowledge, students can deal with modern world challenges. India has a rich heritage of intellectual and scientific advancements. Now, therefore, by advancing the IKS, we can demonstrate India's global contribution to knowledge and develop feelings of pride and adventure among students.

Research Questions

Researchers were motivated by the following questions to undertake this paper:

1. How to integrate the Indian Knowledge System into today's education system?
2. What is trending in the field of IKS right now?



3. What are the strategies suggested by the NEP-2020 to implement IKS?
4. What are the advantages of blending IKS into the modern education system?
5. What are the pros and cons of integrating IKS into the modern education system?

NEP 2020: A Paradigm Shift towards Integrating IKS in Education

Modern education shifted to the technology era. Students can learn integrated education with technology and traditional knowledge. NEP 2020 highlights the importance of integrating the Indian knowledge system (IKS) into our education system. It proposes that the curriculum should include Indian philosophy, ethics, arts, literature, science, and technology. The goal is to build an education system that is not only inclusive but also deeply connected to India's rich heritage. In this way, students can grow into well-rounded global citizens while staying proud of their heritage. The objective related to the IKS is below:

Integrating IKS in Education: The National Education Policy (NEP 2020) focuses on delving into India's rich heritage and cultural and ethical treasures for integrating it into education. It aims to celebrate and keep alive the wisdom of our past by including components like Vedic mathematics, ancient science, traditional technology, and local art forms in the curriculum. In this way, students can learn not only modern education but also connect with our incredible heritage.

Multidisciplinary and holistic education: The policy advocates taking together modern science education and traditional Indian education to create a versatile education system. The idea is to make sure they work together to give students a complete and meaningful learning experience.

Language and Literature Preservation: NEP 2020 knows how important it is to save and promote local and classical languages along with their tales and culture. This helps protect the knowledge and culture of these languages. Also, it makes sure not to lose these treasures over a long period.

Promoting Research in IKS: The policy wants college and university research groups to study the traditional knowledge system more deeply. By doing this, it aims to highlight India's rich intellectual heritage and gain global recognition.

Sustainability and Traditional Practice: Indian knowledge systems have always been about being with nature and keeping things sustainable. The NEP-2020 plans to use this traditional knowledge to help with today's environmental problems.

Promotion of Cultural Heritage: The NEP 2020 talks about how education can help us acknowledge (appreciate) and take pride in India's rich cultural heritage. Schools and colleges are encouraged to host events, workshops, and exhibition activities that showcase India's amazing history and its contribution to different areas like arts, science, and technology. It's all about helping all students connect with and solemnize the incredible heritage of our country.



Learning to Lead the World: The policy intends to make India a top leader in education by using traditional knowledge to solve modern educational challenges. It's all about combining traditional ideas with new technology to create something unique and meaningful.

Developing Digital Resources for IKS: NEP 2020 emphasizes the importance of preserving and promoting IKS, which includes traditional knowledge, ancient texts, and cultural heritage. The policy emboldens the use of technology to digitize and make these resources accessible to a wider audience. By developing digital resources for IKS, such as digital manuscripts on online archives and e-learning platforms, we can preserve our IKS for future generations.

Current Trends to Integrate IKS into the Indian Education System

Schools and universities in India are starting to include traditional knowledge such as Vedic mathematics, yoga, and ancient science in their courses. Even top institutions like the IITs are creating IKS centers for research and teaching. It's all about integrating traditional knowledge with modern education. Therefore, government-funded projects and seminars have been initiated on combining traditional with modern science. They have turned texts into digital formats so more students can access them. They are helping the world see how much India has contributed to fields such as mathematics, astronomy, Ayurveda, and more. It's not just about preserving the past learning experience. It's also showing off India's rich knowledge and boosting its global influence in a friendly and meaningful way. The following current trends to integrate IKS into the Indian education system have been demonstrated:

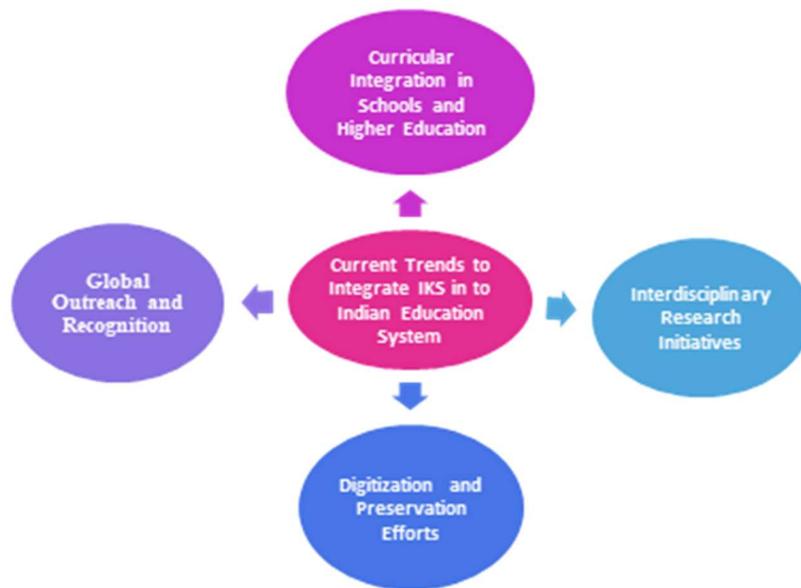


Fig. 1: Current Trends to Integrate IKS into Indian Education System

Curricular Integration and Higher Education: Nowadays IKS is the most burning topic in the field of education. Schools, colleges, and universities are integrating IKS into their syllabi, like philosophy, medicine, Vedic mathematics, physics, astronomy, culture, and ancient science. Indian big institutional



IITs and central universities are establishing IKS research centers and teaching in their fields. They are creating new courses focused on traditional knowledge, Sanskrit, and regional languages.

Interdisciplinary Research Initiatives: Interdisciplinary research initiatives are all about bringing students from different fields together to solve the problem. This will create a team where scientists, engineers, artists, and even business experts all work side by side sharing their unique skills and ideas. The government-funded projects through organizations like the Indian Council of Historical Research (ICHR), ICSSR, and the Indian Knowledge System Division (IKS-D) are now providing funds to carry out research, projects, and seminars. These projects combine traditional knowledge with today's science and technology, which can bridge the past and present.

Digitization and Preservation Efforts: There is a big push to digitize and preserve IKS. It can save precious stories, traditions, and wisdom from communities that have been passed down for generations. By turning this knowledge into digital formats such as video, audio recordings, and online archives, we can make sure it does not get lost again over time. Ancient manuscripts and texts are being digitized through projects such as the National Mission for Manuscripts (NMM), etc.

Global Outreach and Recognition: India is sharing its ancient knowledge in Vedic mathematics, astronomy, and ancient science with the world through conferences and workshops as well as collaboration with other countries. At the same time yoga and Ayurveda have become more popular everywhere. This is helping people around the globe see and value Indian tradition, making IKS an important part of how the world sees India.

Enriching Education by Integration of IKS

We can integrate the Indian Knowledge System (IKS) into our education system by following the recommendation of the NEP 2020. We should make the experience, tradition, and practice of local communities an essential part of our school curriculum. This may include extensive stories, arts, farming techniques, or even traditional medicinal practices in the curriculum. The aim is to make education more connected to real life and to respect the knowledge that has been passed on to the next generation. By doing this, we teach the kids from their experiences rather than books. Also, we can help them appreciate their roots and culture. The NEP 2020 has a big vision for IKS. It's all about transforming our knowledge of traditions, culture, and ancient wisdom into modern technological education. We can shine in the world with the knowledge that has been part of India's heritage for thousands of years, such as yoga, traditional arts and culture, and even local languages. The core idea is to make education more linked to our roots while still keeping it relevant for the present world. The detailed strategy for the integration of IKS is given below:

Strategies to Integrate IKS into Education

The following strategies may be followed that aim to preserve, promote, and integrate IKS into modern education, research, and global scenarios.



Fig. 2: Strategies to Integrate IKS into Education through Implementing NEP 2020

Curriculum Development and Integration

Embodiment of IKS in Curriculum: It is a great idea to make an interdisciplinary program that combines modern sciences and traditional practices. We can include topics such as Vedic mathematics, ancient healthcare systems (like Ayurveda, Siddha, and yoga), and other Indian sciences in school and college curricula. Students can learn the best of both categories and explore how our rich heritage connects with present knowledge.

Skill-based Education: Skill-based education includes traditional arts and crafts, textiles, and music. They are valuable skills to enrich the curricula and also the profession. NEP 2020 proposed vocational training that can help students learn practical, creative, and cultural skills that matter in the real world.

Multilingual Education: Revitalizing Sanskrit and other classical Indian languages, along with regional languages, to enable students to access original Indian texts and manuscripts, while ensuring multilingual education in the early years of learning to enhance cultural understanding.

Building Research and Innovation: The Indian Knowledge System Division is a team under the Ministry of Education to coordinate and support research work, curriculum design, and the development of material regarding the Indian knowledge system. They help to share ancient Indian wisdom in a way that works for the present education system.

Research Funding and Initiative: Funding should be provided for research in traditional knowledge fields such as ancient literature, Ayurveda, and Indigenous engineering practices. Promoting research work with the university, IKS practitioners, and international institutions can help explore and preserve these valuable fields.



Indigenous Technology Development: We have seen many ancient engineering feats on historical monuments, beautiful temples, tomb and mosque designs, and clever water systems like step-wells that show just how smart our ancestors were. These ideas were ahead of their time and study. We can learn a lot from these architects. It's like taking the best ideas from the past and making them work for the future.

Building Educators' and Institutions' Capacity

Training Educators: We need to train teachers so they can confidently teach Indian Knowledge System topics. Developing the teacher training program to prepare educators with the skills to teach IKS subjects. So they are well prepared to bring these valuable subjects into the classroom.

IKS Resource Centers: The Indian government is setting up special resource centers in schools and universities to provide materials, training, and infrastructure for IKS-related education. These centers will be helpful and easier to access for students.

Collaborative Partnership: The government is working together with the students and groups who know about the traditional ways of learning and sharing knowledge. If we do collaborative work, it can help connect the wisdom passed down through stories and spoken traditions with the kind of learning that happens in schools. It's all about transforming different ways of knowing together so it is good for everyone.

Using Technology and Digitalization: Nowadays technology plays a very important role in supporting the Indian Knowledge System. A lot of tools like educational apps, websites, or digital records can help preserve and share traditional knowledge widely. Modern tools to keep IKS alive and make it easier for everyone to access. NEP 2020 took an initiative like the National Mission for Manuscripts (NMM) to digitize and preserve ancient Indian texts. MOOCs focused on IKS subjects and developing e-learning content using technology to create virtual museums and archives displaying India's cultural heritage.

Implementation Framework: By following the below-mentioned points, we can effectively integrate the IKS framework into the modern education system as proposed in the NEP 2020.

Monitoring and Evaluation: A framework will be designed to monitor the Indian Knowledge System (IKS) in educational objectives across institutions, and regular evaluations will be conducted to assess the effectiveness of IKS programs.

Incentive for Institutions: NEP 2020 encourages financial incentives to be provided to educational institutions to integrate IKS into their curriculum. Additionally, academic establishments that make substantial contributions to IKS research and circulation should be formally recognized. Such measures can foster engagement and promote the preservation of this valuable knowledge.

Community Involvement: The Indian government is running awareness campaigns to help people understand why IKS are so important for inclusive growth. We will also work with communities to encourage them to keep their local knowledge system awake and pass it on to the next generation.

IKS Awareness and Media: Raising awareness about IKS can be effectively achieved through media platforms like documentaries, films, and targeted campaigns. These tools have the potential to engage younger audiences sparking their interest and fostering a deeper appreciation for traditional knowledge.

Benefits of Integrating IKS into Education through NEP-2020

The NEP 2020 emphasizes the importance of the Indian Knowledge System and has some significant benefits. It helps students link with their roots by learning about local traditions, culture, and customs. This makes education more engaging and meaningful. It encourages holistic and multidisciplinary education, equity and inclusion, promotion of regional and classical languages, focus on research innovation and skill development, and employability.

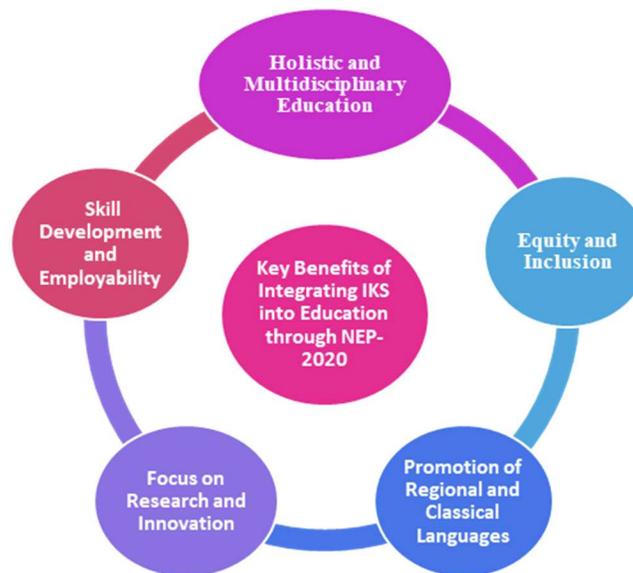


Fig.3 Benefits of Integrating IKS into Education through NEP-2020

Education for Holistic and Multidisciplinary: The National Education Policy 2020 advocates for a holistic and multidisciplinary approach to promote an understanding of how different fields are interconnected and can be utilized together to solve complex issues and enhance the quality of education. It articulates arts, science, and humanities with the Indian knowledge system. Its main aim is to develop critical thinking, creative thinking, and adaptability in students.

Equity and Inclusion: The policy ensures access to quality education for all with a special focus on marginalized groups. It aims to foster an inclusive educational circumstance that ensures equal opportunities and participation for all.

Encouragement of Local Languages: The policy emphasizes the encouragement of local languages by advocating for providing education in mother tongues and the study of classical languages. Classical languages can serve as a means to conserve national linguistic diversity and cultural heritage.

Emphasize Research and Creative Solutions: Its main goal is to promote quality education and interdisciplinary research, including modern scientific realism and traditional knowledge systems. The policy, by formulating the National Research Foundation, emphasizes advancing research and innovation. The aim is to prepare a flourishing research ecosystem that drives innovation and contributes to societal improvement.

Skill Development and Employability: The policy focused on teaching students practical skills through vocational training. It also carries traditional crafts, art forms, and eco-friendly practices into the learning process. Therefore helping students gain real-world abilities that can boost their knowledge and skills.

Opportunities in Integrating IKS into Education

Opportunities in integrating IKS into education include promoting holistic education, preserving cultural heritage, enhancing global recognition, and fostering interdisciplinary research. These are discussed below:



Fig 4 : Opportunities in Integrating IKS into Education

Preservation of Cultural Heritage: Protecting our cultural heritage keeps their traditional knowledge system, ensuring their transmission to future generations. After this process strengthens national identity and fosters pride in India's rich heritage.

Global Relevance and Recognition: As we are aware, yoga and Ayurveda are great examples of how traditional knowledge is becoming very popular worldwide. These practices are loved by people everywhere. This shows how ancient Indian wisdom can help improve health and well-being. India is not



only helping people live better lives but also strengthening its reputation as a leader in natural healthy living.

Global Relevance and Recognition: IKS offers unique solutions to global challenges such as climate change, health, and sustainable living. However, these systems often lack proper recognition in international platforms or scientific communities. By integrating IKS, we can promote cultural diversity, foster innovation, and address global issues.

Sustainable and Environment: We can develop innovative approaches to protect and preserve our environment. IKS helps in examining ancient practices in agriculture, water management, and architecture to uncover sustainable solutions that promote ecological balance. By integrating these time-tested methods with contemporary knowledge, we can save our environment.

Multidisciplinary Education: The NEP 2020 aimed to develop the social, physical, intellectual, emotional, and moral capacities of human beings. The integration of IKS is much needed with STEM (science, technology, engineering, and mathematics) and arts subjects. It encourages a holistic education framework and fosters creative and critical thinking through diverse perspectives.

Health and Wellness: IKS provides alternative ways to address modern health issues. Ayurveda, meditation, and yoga are important tools that can be used in modern health crises. These methods focus on holistic well-being. It supports the health of the mind, body, and spirit altogether.

Employment and Entrepreneurship: The NEP supports local industries that use traditional knowledge. It helps rural communities grow and create chances for people to learn new skills. It is a great way to bring more opportunities to these areas while celebrating our unique heritage.

Challenges in Integrating IKS into Education

There are some challenges in integrating IKS into education. These include resistance to curriculum changes, resource limitations, maintaining quality and authenticity, and ensuring uniform implementation across diverse institutions. These are discussed below:

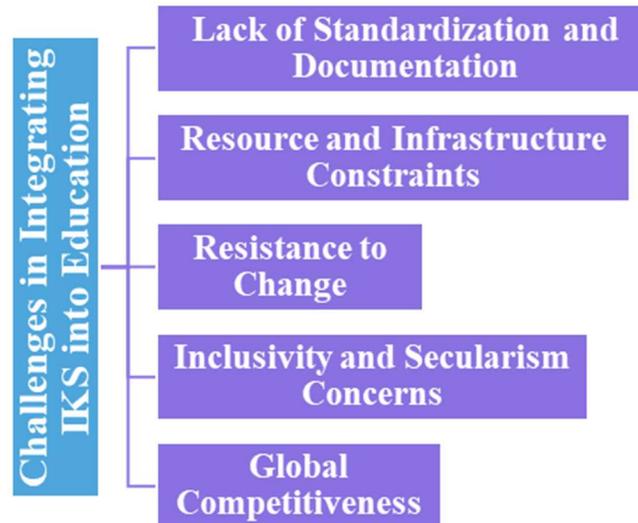


Fig. 5: Challenges in Integrating IKS into Education

Lack of Standardization and Documentation: It means that the Indian Knowledge System (IKS) is passed down orally and isn't written down or organized in a clear, consistent way. This makes it hard to study, share, or include in formal education or research. It is a very challenging task for scientific validation.

Resource and Infrastructure Constraints: Resource and infrastructure constraints are a major challenge for integrating the Indian Knowledge System. Without proper support, valuable practice and wisdom can be lost over a period. Limited access to education and modern facilities makes it strong support to integrate IKS into a broader system or the recognition it deserves.

Resistance to Change: It is a human tendency to resist change. So, resistance to change in IKS often happens because these traditions are deeply tied to culture, identity, and history. People may fear losing their heritage or that modern methods will disrespect their practice. For IKS to evolve, trust, respect, and collaboration are needed to blend traditional knowledge with new ideas without losing its core value.

Inclusivity and Secularism Concerns: It is important to ensure respect for all communities' knowledge and avoid favoring any one religion or culture. Sometimes cultural and religious bias in certain aspects of IKS may arise. Balancing tradition with inclusivity is key to making IKS more widely accepted and useful for all.

Global Competitiveness: A major challenge for IKS in global competition is that it often lacks formal documentation and scientific validation. Without proper recognition and adaptation, IKS struggles to compete on a worldwide scale. Limiting its potential to contribute to innovative and sustainable solutions worldwide.



Conclusion

The National Education Policy (NEP 2020) is a major step towards blending India's rich traditional knowledge with modern education. It focuses on the use of Indian language, arts, and culture at all levels of education. It also aims to make learning more meaningful by including ancient wisdom such as Vedic mathematics, yoga, and Ayurveda in the curriculum. This helps students connect with their roots while preparing them for the future world. The policy also promotes multilingual education, research in traditional practice, and sustainable solutions inspired by India's heritage. However, there are some challenges to integrating it. Many traditional practices are not written down or scientifically validated. So it is difficult to include a formal education setup. There is also resistance to change, limited resources, and the need to ensure that these practices are taught in a way that respects all cultures and religions. NEP 2020 can create a balanced education system that values both tradition and innovation. Helping students grow into well-rounded and globally aware individuals. This approach not only preserves cultural legacy but also makes education more inclusive and impactful for future generations. The integration of the IKS in education represents a forward-looking approach that may transform the education system of India by fostering cultural awareness, intellectual diversity, and all-around development of students.

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