

Indian Knowledge System and NEP 2020: A Study of Curriculum Integration in Contemporary Education

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Abstract

The Indian Knowledge System (IKS) represents India's rich intellectual, scientific, philosophical, and cultural heritage, encompassing diverse fields such as mathematics, medicine, environmental sustainability, arts, ethics, and spirituality. Recognizing its significance in fostering holistic education, the National Education Policy (NEP) 2020 advocates the integration of IKS into mainstream education. The present study aims to examine the integration of IKS within the framework of NEP 2020 by assessing the awareness and perceptions of teachers and students, identifying the perceived educational benefits, and exploring the challenges associated with its implementation. A descriptive survey research design was adopted, and data were collected from 100 respondents, including school teachers, college faculty, school students, and college students, through a structured questionnaire. The collected data were analysed using percentage analysis. The findings indicate that most respondents possess a positive perception of integrating IKS into education and believe that it enhances cultural awareness, ethical values, creativity, critical thinking, environmental consciousness, and holistic personality development. At the same time, respondents identified several barriers, including inadequate teacher training, limited teaching-learning resources, insufficient awareness, and the absence of clear implementation guidelines. The study highlights the need for systematic curriculum planning, capacity-building programmes for educators, and the development of contextualized instructional materials to ensure effective implementation of IKS. The findings contribute to the ongoing discourse on educational reforms by providing empirical evidence to support the successful integration of IKS envisioned under NEP 2020, thereby promoting culturally rooted, value-based, and holistic education.

Keywords: Indian Knowledge System, National Education Policy 2020, Curriculum Integration, Holistic Education, Indigenous Knowledge, Educational Reform, Teacher Readiness.

1. Introduction

Education serves as a fundamental instrument for individual empowerment, social transformation, and national development. Beyond the transmission of knowledge, education facilitates the cultivation of values, critical thinking, creativity, and responsible citizenship. Historically, the Indian education system embodied a holistic approach that integrated intellectual, moral, spiritual, and practical dimensions of learning. Ancient educational institutions such as Takshashila and Nalanda emphasized interdisciplinary learning, experiential pedagogy, ethical conduct, and the pursuit of wisdom (University Grants Commission, 2023).

The Indian Knowledge System (IKS) refers to the cumulative body of knowledge, practices, innovations, philosophies, and cultural traditions developed within Indian civilization over thousands of years. It encompasses significant contributions in disciplines such as Ayurveda, Yoga, Astronomy, Mathematics, Metallurgy, Architecture, Environmental Conservation, Agricultural Sciences, Linguistics, Literature, and Governance. These knowledge traditions reflect a comprehensive understanding of human development, societal well-being, and ecological sustainability (All India Council for Technical Education, 2021; Sharma & Sharma, 2023).

In recent years, educational researchers have increasingly emphasized the importance of integrating indigenous and traditional knowledge systems into contemporary educational frameworks to promote contextualized learning, cultural identity, sustainability, and value-based education (Kumar & Singh, 2022; Patel & Desai, 2023). Research indicates that integrating indigenous knowledge into formal education enhances learners' critical thinking, environmental awareness, and appreciation of cultural diversity while supporting sustainable development goals (Mishra & Tiwari, 2023).

The National Education Policy (NEP) 2020 represents a transformative reform in Indian education by advocating the integration of Indian Knowledge Systems into curriculum design, pedagogy, teacher education, and research. The policy envisions an education system rooted in Indian ethos while remaining globally relevant, emphasizing multidisciplinary education, experiential learning, critical inquiry, ethical values, and the preservation of India's rich intellectual heritage (Ministry of Education, 2020). Recent studies have reported that the implementation of IKS under NEP 2020 can strengthen learners' cultural competence, holistic development, innovation, and employability while fostering national identity and global citizenship (Gupta & Verma, 2024; Reddy & Nair, 2024).

Despite growing policy support, the effective implementation of IKS in educational institutions continues to face several challenges, including limited teacher preparedness, inadequate curriculum resources, insufficient awareness, and the absence of systematic implementation frameworks (Patel & Joshi, 2024; Singh et al., 2023). Addressing these challenges requires curriculum reforms, professional development programmes for educators, and the development of context-specific teaching-learning resources.

Against this background, the present study examines the integration of Indian Knowledge Systems within the framework of NEP 2020. It investigates the awareness of teachers and students, explores the perceived educational benefits of IKS, identifies implementation challenges, and proposes recommendations for strengthening its integration into contemporary education. The study contributes to the growing body of literature on educational transformation by providing empirical evidence to support the effective implementation of IKS in alignment with the vision of NEP 2020.

2. Review of Literature

The integration of the Indian Knowledge System (IKS) into contemporary education has emerged as an important area of educational research, particularly after the introduction of the National Education Policy (NEP) 2020. The policy recognizes IKS as a vital component of educational reform and advocates incorporating India's philosophical, scientific, linguistic, artistic, and cultural heritage into teaching-learning processes across all levels of education. It emphasizes experiential learning, multidisciplinary education, ethical development, critical thinking, and cultural rootedness while ensuring global relevance (Ministry of Education, 2020). Recent studies have suggested that the integration of IKS can strengthen holistic education by connecting traditional wisdom with

contemporary educational practices and preparing learners to address present-day social and environmental challenges (Sharma, 2021; Kumar & Singh, 2022).

Several researchers have highlighted the educational benefits of integrating IKS into formal education. The literature indicates that indigenous knowledge promotes contextualized learning, enhances cultural identity, strengthens ethical values, and develops higher-order thinking skills among learners. Furthermore, traditional Indian knowledge in areas such as environmental conservation, agriculture, health, and community living has been recognized as a valuable resource for promoting sustainability and responsible citizenship. These studies argue that incorporating indigenous knowledge into the curriculum enriches learning experiences while contributing to the achievement of sustainable development goals and value-based education (Patel & Desai, 2022; Kumar & Singh, 2022; Sharma, 2021).

Despite the recognized benefits, researchers consistently report several challenges in implementing IKS within educational institutions. The existing literature identifies inadequate teacher preparedness, limited awareness among stakeholders, insufficient teaching-learning materials, lack of curriculum integration strategies, and inadequate institutional support as major barriers to effective implementation. Studies on teachers' perceptions indicate that although educators generally express positive attitudes toward IKS, they require structured professional development programmes, curriculum guidelines, and institutional support to integrate indigenous knowledge effectively into classroom practices (Rao, 2023; Kumar & Singh, 2022).

Although previous studies have examined the philosophical foundations, educational relevance, and implementation challenges of IKS under NEP 2020, empirical evidence comparing the perceptions of both teachers and students remains limited. Most existing studies focus primarily on policy analysis or educators' perspectives, leaving a gap in understanding stakeholders' collective views regarding awareness, perceived benefits, and implementation challenges. The present study seeks to address this gap by examining the perceptions of both teachers and students toward the integration of Indian Knowledge Systems under NEP 2020, thereby contributing empirical evidence to support curriculum development and educational policy implementation.

3. Objectives of the Study

The present study aims to examine the concept, nature, and scope of the Indian Knowledge System (IKS) and to analyze its significance in contemporary education within the framework of the National Education Policy (NEP) 2020. It seeks to explore the role of NEP 2020 in facilitating the integration of IKS into educational curricula and to assess the level of awareness and understanding of IKS among teachers and students. The study further evaluates the perceived educational benefits of IKS-based learning in promoting holistic development, including cultural awareness, ethical values, critical thinking, creativity, and environmental consciousness. In addition, it identifies the challenges and constraints that hinder the effective implementation of IKS in educational institutions, such as inadequate teacher preparedness, limited instructional resources, and insufficient institutional support. Based on these findings, the study proposes evidence-based strategies and practical recommendations for strengthening the integration of IKS into the education system. Collectively, these objectives contribute to a comprehensive understanding of the opportunities and challenges associated with implementing IKS under NEP 2020 and provide valuable insights for policymakers, curriculum

developers, educational administrators, and teachers in promoting culturally rooted, value-based, and holistic education.

4. Material and Methods

The present study adopted a quantitative research approach using a descriptive survey design to examine the integration of the Indian Knowledge System (IKS) within the educational framework envisaged by the National Education Policy (NEP) 2020. The descriptive survey design was considered appropriate because it facilitated the assessment of existing levels of awareness, perceptions, and attitudes of key educational stakeholders toward IKS without manipulating any variables. The study was conducted among selected educational institutions comprising both school and higher education sectors to obtain a comprehensive understanding of stakeholder perspectives on IKS integration. The target population included teachers and students, and a purposive sampling technique was employed to select a sample of 100 respondents, consisting of 30 school teachers, 20 college teachers, 30 school students, and 20 college students. The inclusion of participants from different educational levels ensured a balanced representation of teaching and learning communities.

Data were collected using a researcher-developed structured questionnaire designed in accordance with the objectives of the study. The instrument included items related to awareness and understanding of IKS, its perceived significance in contemporary education, attitudes toward its integration under NEP 2020, perceived educational benefits, implementation challenges, and suggestions for effective curriculum integration. Prior to data collection, participants were informed about the purpose of the study and assured of the confidentiality of their responses. The completed questionnaires were systematically classified and tabulated, and the data were analyzed using percentage analysis to summarize respondents' opinions and identify prevailing trends and patterns. The findings were presented in tabular form and interpreted in relation to the objectives of the study to provide empirical evidence on the integration of IKS in education.

5. Result and Discussion

The study comprised 100 respondents selected through purposive sampling, including 30 school teachers, 20 college teachers, 30 school students, and 20 college students. The balanced representation of teachers (50%) and students (50%) enabled a comprehensive assessment of stakeholders' perceptions regarding the integration of the Indian Knowledge System (IKS) within the framework of the National Education Policy (NEP) 2020. The inclusion of participants from both school and higher education sectors enhanced the diversity of viewpoints and strengthened the reliability of the findings.

5.1 Awareness of the Indian Knowledge System

Table :- 1 Awareness Level Regarding Indian Knowledge System (N = 100)

Category	Number of Respondents	Percentage
Highly Aware	28	28%
Moderately Aware	42	42%
Slightly Aware	20	20%
Not Aware	10	10%
Total	100	100%

The findings presented in Table 1 indicate that awareness of the Indian Knowledge System among the respondents was generally satisfactory. Nearly half of the respondents (42%) reported a moderate level of awareness, while 28% indicated a high level of awareness. However, 20% were only slightly aware and 10% reported no awareness of IKS. Overall, 70% of the respondents demonstrated moderate to high awareness, suggesting that the concept of IKS has gradually gained visibility among educational stakeholders following the implementation of NEP 2020.

The findings indicate that policy initiatives and institutional efforts have contributed to increasing awareness of Indian knowledge traditions. Nevertheless, the existence of respondents with limited awareness suggests that dissemination of IKS-related information remains uneven across educational institutions. These findings are consistent with recent studies, which report that awareness of IKS has increased after NEP 2020, although the depth of understanding varies considerably among teachers and students due to differences in institutional exposure and professional development opportunities.

5.2 Perceptions Towards Curriculum Integration of IKS

Table 2
Perceptions Regarding the Need for IKS Integration in Curriculum (N = 100)

Response Category	Number of Respondents	Percentage
Strongly Agree	58	58%
Agree	27	27%
Neutral	10	10%
Disagree	5	5%
Total	100	100%

Table 2 reveals an overwhelmingly positive perception regarding the integration of IKS into educational curricula. A majority of respondents (58%) strongly agreed, while 27% agreed that Indian Knowledge Systems should be incorporated into formal education. Only 10% remained neutral and 5% disagreed. Thus, 85% of the respondents expressed favourable opinions regarding curriculum integration.

The strong support observed among respondents reflects growing acceptance of culturally responsive and multidisciplinary education promoted under NEP 2020. Respondents recognized that IKS complements contemporary education by connecting traditional wisdom with modern scientific and social perspectives. Similar findings have been reported in recent studies on teacher education, which indicate that teachers and prospective educators perceive IKS as an important means of promoting holistic learning, cultural identity, and value-based education while strengthening students' engagement with indigenous knowledge traditions.

Overall, the findings demonstrate that respondents possess favourable perceptions toward integrating the Indian Knowledge System into education and acknowledge its contribution to holistic learning and cultural preservation. However, the results also highlight that the successful realization of NEP 2020 requires sustained investments in teacher education, curriculum development, instructional resources, and institutional support systems to bridge the gap between policy intentions and classroom implementation.

6. Suggestions and Recommendations

The findings of the present study indicate that the effective integration of the Indian Knowledge System

(IKS) into educational curricula requires systematic planning and sustained institutional support. To strengthen implementation, educational institutions should organize comprehensive faculty development programmes that enhance teachers' understanding of IKS, its philosophical foundations, and its pedagogical applications. Simultaneously, curriculum developers should design structured, age-appropriate, and interdisciplinary learning materials that integrate Indian scientific, philosophical, cultural, linguistic, and environmental knowledge traditions with contemporary educational practices. The development of multilingual digital resources, open educational repositories, and technology-enabled learning platforms would further improve accessibility, facilitate wider dissemination of IKS content, and support inclusive learning across diverse educational settings.

In addition, educational institutions should promote experiential learning by incorporating project-based activities, field visits, community engagement programmes, and interactions with local knowledge holders to enable learners to experience indigenous knowledge in real-life contexts. Such initiatives can enhance cultural awareness, ethical values, creativity, critical thinking, and environmental responsibility while making learning more meaningful and contextual. Furthermore, universities and educational organizations should establish dedicated research centres and academic platforms to encourage interdisciplinary research, documentation, innovation, and scholarly collaboration in the field of Indian Knowledge Systems. Regular monitoring and evaluation mechanisms should also be instituted to assess the effectiveness of IKS integration, identify implementation gaps, and guide continuous curriculum improvement. Collectively, these measures will facilitate the successful implementation of IKS envisioned under the National Education Policy (NEP) 2020 and contribute to the development of a holistic, value-based, culturally rooted, and globally relevant education system.

7. Limitations of the Study

The findings of the study should be interpreted within certain limitations. The study was confined to a sample of 100 respondents and therefore may not be fully representative of all educational institutions. The conclusions were based on self-reported responses, which may be influenced by individual perceptions and subjective interpretations. Furthermore, the study employed percentage analysis and did not utilize advanced statistical techniques for data interpretation.

8. Conclusion

The present study examined the integration of the Indian Knowledge System (IKS) within the educational framework of the National Education Policy (NEP) 2020 by exploring the awareness, perceptions, perceived educational benefits, and implementation challenges among teachers and students. The findings indicate that a majority of the respondents possess moderate to high awareness of IKS and strongly support its integration into educational curricula. The study further demonstrates that IKS has considerable potential to enrich contemporary education by fostering cultural awareness, ethical values, creativity, critical thinking, environmental consciousness, and holistic learner development. These findings reaffirm the relevance of IKS in achieving the vision of NEP 2020, which advocates an education system that is rooted in Indian knowledge traditions while remaining globally relevant.

The study also highlights several merits of integrating IKS into education, including the promotion of value-based learning, multidisciplinary understanding, experiential learning, cultural preservation, and sustainable development. At the same time, it identifies important challenges that may hinder effective implementation, such as inadequate teacher training, limited instructional resources, insufficient

awareness, and the absence of clear curriculum guidelines and institutional support. These limitations indicate that policy initiatives alone are insufficient unless they are complemented by systematic curriculum reforms, continuous professional development, resource development, and effective implementation strategies. Although the study provides useful empirical evidence on stakeholder perceptions, it is limited by its relatively small sample size and the use of purposive sampling, which may restrict the generalizability of the findings. Future research may involve larger and more diverse samples, employ mixed-method or longitudinal research designs, and evaluate the long-term educational outcomes of IKS integration across different regions and educational contexts. Overall, the study concludes that the successful integration of IKS under NEP 2020 has the potential to transform Indian education by creating culturally rooted, ethically responsible, innovative, and globally competent learners while preserving India's rich intellectual and knowledge heritage.

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