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# Indian Knowledge System (IKS)

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## **Abstract:**

Indian knowledge system aims to support and facilitate further research to solve contemporary societal issues. IKS is based on Vedic literature, the Vedas and the Upanishads. Existing IKS courses may be synced to digital learning platforms. Modules for training and orientation of educators may be designed to improve quality of classroom delivery on IKS courses. Specialised teacher training centres will be set up to train teachers on specific topics related to the Indian Knowledge Systems. There will be encouragement for innovation in IKS through Grand National Challenges, National Competitions, Hackathons, and incentivizing innovation. Institutions may access global collaborations through institutions such as Indian Council of Historical Research (ICHR) for conducting India-centric research. Initial seed funding will be provided for the establishment of IKS Centers in various HEIs. There will be an approach to public through various mechanisms to disseminate and popularize authentic IKS knowledge to develop informed and confident citizenry. People will be involved in various IKS initiatives through Jan Bhagidari programs similar to citizen science initiatives. Employment opportunities for youth through skill-based programs will be created. IKS will promote heritage technology by bringing technology solutions to showcase the Indian heritage to Indians and the world. Its aim is to capture 10% of the world tourism and provide massive employment opportunities to our youth.

## **Keywords:**

Indian knowledge system, IKS, skill-based programs, employment opportunities, NEP 2020, Vedic literature, Upanishad, education, health, environment

## **Introduction:**

The Indian Knowledge System (IKS) is the systematic transmission of knowledge from one generation to next generation. It is a structured system and a process of knowledge transfer rather than a tradition. The Indian Knowledge System is based on the Vedic literature, the Upanishads, the Vedas, and the Upvedas. The NEP-2020 (National Education Policy) recognizes this rich heritage of ancient and eternal Indian knowledge and thought as a guiding principle. The Indian Knowledge Systems comprise of Jnan, Vignan, and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis. This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. This has influenced classical and other languages of Bharat, that were transmitted through textual, oral, and artistic traditions. It includes knowledge from ancient India and, its successes and challenges, and a sense of India's future aspirations specific to education, health, environment and indeed all aspects of life.

## **Objectives of Indian knowledge system:**

Indian knowledge system aims to support and facilitate further research to solve the contemporary societal issues in several fields such as Holistic health, Psychology, Neuroscience, Nature, Environment & Sustainable development. The primary aim of drawing from the past and integration of the Indian knowledge systems is to solve the contemporary and emerging problems of India and world by using our ancient knowledge systems represented by uninterrupted tradition of knowledge transfer and unique point of view (Bhāratīyū Drishti).

**IKS cell:**

Indian Knowledge System (IKS) is an innovative cell under Ministry of Education (MoE) at AICTE, New Delhi. It is established to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications. It will actively engage for spreading the rich heritage of our country and traditional knowledge in the field of Arts and literature, Agriculture, Basic Sciences, Engineering & Technology, Architecture, Management, Economics, etc.

**Functions of IKS Division:**

The main function of IKS division is to facilitate and coordinate IKS based/related inter and trans disciplinary work done by various institutions in India and abroad including universities, institutions of national importance, R&D laboratories and different ministries and inspire private sector organizations to engage with it. Other one is to establish, guide and monitor subject-wise interdisciplinary research groups comprising of researchers from institutes, centers and individuals. Also, to create and promote popularization schemes, to facilitate funding of various projects and develop mechanisms to undertake research and to make policy recommendations wherever required for the promotion of IKS.

**Vision:**

To promote interdisciplinary research on all aspects of 'Indian Knowledge Systems', preserve and disseminate 'Indian Knowledge Systems' for further research and societal applications.

**Mission:**

1. Create a database of individuals and organizations who have contributed by way of Research, Teaching, Publication and Preservation of ancient and contemporary rich Indian knowledge systems ranging from Art, Music, Dance, Drama, to Mathematics, Astronomy, Science, Technology, Life Sciences, Environment and Natural sciences, Health care, Yoga, Law, Jurisprudence, Economics, Social sciences, Psychology, Philosophy, Management, Linguistics, oral traditions of India, knowledge hidden in Sanskrit, Prakrit, Tamil, Pali, etc.
2. Create portal for archival and dissemination of this rich knowledge and also create an open portal and keep it dynamic and live like wiki, in a PPP mode.
3. Promote and enable further research to address the societal challenges faced today in several areas including Holistic health, Psychology, Neuroscience, Nature, Environment, and Sustainable development.
4. To identify scholars and institutions who have worked in various areas of IKS and their works and to categorize the major areas.
5. To get reports of work done by all people who have contributed to IKS and bring out regular publications.
6. To promote research in IKS for providing proof of concepts, new knowledge generation, effective interdisciplinary work useful for society.
7. To create research fellowships or fellowships of visiting Professors/ Scientists/ Scholars: Sanskrit Professors in IITs/ IISERs/IIMs/ Universities and Professors of Science and Technology in Sanskrit universities.
8. To provide financial assistance to research activities, workshops, seminars and publications for furthering the cause of IKS. To suggest measures to integrate IKS in text books and reference books of modern disciplines of knowledge offered at school and higher education.
9. To establish IKS cells in General universities, Sanskrit Universities, and other institutions under MoE.
10. To initiate collaboration/ coordination between institutions under Ministry of Education (MoE), other ministries, departments, independent scholars, NGOs and private institutions working in the field of IKS to promote interdisciplinary research involving modern streams and ancient Shastras.
11. To explore and adopt a PPP model, wherever feasible (e.g. creating a wiki type platform and comprehensive IKS portal).
12. To constitute Expert Groups and committees to plan, execute and oversee the objectives of IKS division.
13. To take up any step, work, project or activity to further the cause of IKS.

## **Subjects under Indian knowledge system:**

Humanities, Engineering, Medicine, Agriculture, Community knowledge systems, Fine and Performing arts, Vocational skills, etc, which have IKS content. As per the guidelines, the courses must have a clear mapping of the traditional subjects in IKS with the modern subjects such as Chemistry, Mathematics, Physics, Agriculture, etc.

## **Indian knowledge system in Education:**

The IKS will be introduced in a scientific way in school and higher education curricula. The IKS will include tribal knowledge as well as indigenous and traditional learning methods which will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as governance, polity and conservation. Specific courses in tribal ethno-medicinal practices, forest management, traditional (organic) crop cultivation, natural farming, etc. will also be made available. An engaging course on Indian Knowledge Systems will also be available to students in secondary school as an elective.

The policy recognizes that the knowledge of the rich diversity of India should be imbibed first hand by learners. This would include simple activities, such as student tours to various regions of the country. This will not only promote tourism but also help in developing an awareness and appreciation of India's diversity, culture and traditions, as well as knowledge of various parts of the nation. Towards this direction under 'Ek Bharat Shrestha Bharat', 100 tourist destinations in the country will be identified where educational institutions will send students to study these destinations and their history, scientific contributions, traditions, indigenous literature, and knowledge, etc., as a part of augmenting their knowledge about these areas.

At present, 32 IKS Centres established to catalyse original research, education, and dissemination of IKS. Ongoing 75 high end inter-disciplinary research facility like ancient metallurgy, ancient town planning and water resource management, ancient rasayanshastra etc. projects are being put in place. Around 5200 internships on IKS have been offered. Conducted 50 faculty development programs, workshops, and National/International conference. More than 8000 HEIs have started adopting IKS in their curriculum and worked on digitization of 1.5 Lakhs book.

The IKS Division has brought together leading thinkers and practitioners of various knowledge domains to develop Vision 2047 documenting a roadmap for establishing thriving Bhāratīya Gnana Paramparā. By drawing from our vast knowledge, it would be easier to promote and enable further research to address the challenges of our present times. Inclusion of these courses in mainstream education would provide inspiration while preserving the heritage of our learning systems. Through exposure to both traditional and contemporary concepts, students can gain a better understanding of their culture, expand their intellectual development, and enhance their confidence.

## **Guidelines by the Ministry and Regulatory Bodies:**

For achieving the goals of NEP 2020, activities have been undertaken by the Ministry, Regulatory Bodies like UGC & AICTE and HEIs.

### **Guidelines for Incorporating Indian Knowledge in Higher Education Curricula has been issued on 13.06.2023:**

It emphasizes on the promotion of Indian Languages, Arts and Culture, and tries to remove the discontinuity in the flow of Indian Knowledge System (IKS) by integrating IKS into curriculums at all levels of education. It prescribes that every student enrolled in a UG or PG programme should be encouraged to take credit courses in IKS amounting in all to at least 5% of the total mandated credits (interested students may be allowed to take a larger fraction of the total mandated credits). At least 50% of the credits apportioned to the IKS should be related to the major discipline and should be accounted for the credits assigned to the major discipline. The medium of instruction for the IKS courses could be any of the Indian languages.

### **Guidelines for Training/Orientation of Faculty on Indian Knowledge System (IKS) has been issued on 13.04.2023:**

It enables the faculties to generate a positive attitude towards IKS and promote interest in knowing and exploring more through induction programs and refresher courses.

## **Guidelines for Empanelment of Artists/Artisans-in-Residence in Higher Educational Institutions has been issued on 08.05.2023:**

To create collaboration between Artists and HEIs, to develop an effective structure of art education, involving skilled Kala Gurus in teaching, research, and other academic activities on a regular basis, which will synergize the artistic experience with the conventional education to be more productive and beneficial for the students.

## **Guidelines for the introduction of courses based on Indian heritage and culture have been issued on 08.05.2023:**

To make people familiar with the rich cultural and intellectual heritage of India and offer short term multi-tier credit based modular programme with multiple entry and exit based on Indian heritage and culture. It includes dissemination and imparting of knowledge of various dimensions of learning in the spheres of Universal human values, Vedic Maths, Yoga, Ayurveda, Sanskrit, Indian Languages, sacrosanct religious regions located in the Indian subcontinent, Archaeological sites and monuments, Heritage of India, Indian Literature, Indian Sculpture, Indian Music and dance forms, Drama, Visual Arts, Performing Arts, Crafts and Craftsmanship etc. The IKS has made provision has been established for awarding minor degree to students who complete 18 to 20 credits in IKS.

### **Mandatory credit component:**

Universities may introduce learner credits or IKS electives in all courses for imbibing learners across all disciplines with traditional knowledge and pride. UGC has already made it mandatory to include 5% of the total credits in the curriculum related to the IKS courses. AICTE has introduced IKS course for the first-year students in Engineering colleges.

### **Designing regional courses:**

States/UTs may document their respective native cultures, arts, crafts, traditions, architecture, food habits, languages, etc to tailor dedicated courses for learners.

### **Scope of collaborations:**

Given the globalized history of India, multidisciplinary courses designed by universities may consider the scope of collaborating internationally wherever possible. For example, NCERT is undertaking inclusion of text highlighting historical ties between India and Indonesia at school level.

### **Online/ODL courses:**

Existing IKS courses may be synced to digital learning platforms (SWAYAM, NPTEL) and via ODL for learners across geographies.

### **Recruitment:**

Entrance exam syllabus may be launched as a subject for testing under UGC-NET to create a cadre of specialized IKS faculty and researchers.

### **Regularized faculty training:**

Modules for training and orientation of educators may be designed to improve quality of classroom delivery on IKS courses. Establishment of specialized teacher training centers for training teachers in specialized topics of the Indian Knowledge Systems by specialized IKS faculty.

### **Provide hands on learning opportunities:**

IKS Internships – Provide avenues for student internships/apprenticeships and provide counselling to IKS learners in convergence with BGSamvahan Karyakram, the internship programme launched by the IKS Division of MoE.

Hands-on-workshops: Provide opportunities for students to learn various skills in hands on workshops from the experts.

Hackathons: Conduct specialized IKS themed Hackathons and include IKS related topics in the Smart India Hackathon in synergy with the topics given by IKS Division of MoE.

### **Translation of academic content:**

Translation of Teaching Learning Materials for all disciplines into local languages may be done by IKS Centres to engage diverse learners & preserve indigenous identity.

### **Support research and innovation in IKS:**

**Priority research funding** - Dedicated research grants may be proposed through NRF in the future to boost IKS-related research proposals.

Make catalytic grants that encourage original, serious, and deep scholarly research in the IKS and rejuvenate IKS research in India.

Introduce IKS into the prestigious schemes such as PMRF for attracting best talent into the interdisciplinary IKS research.

Promote innovation in the IKS through various grand national challenges, national competitions, and hackathons and incentivizing the innovation.

**International collaborations** – Institutions may access global collaborations through institutions such as Indian Council of Historical Research (ICHR) for conducting India-centric research. Include IKS as a theme in the ASEAN fellowships to foster collaborations among scholars and nurture next generation of scholars.

**Fund institutional support mechanisms:**

Establish institutional support mechanisms through the establishment of the IKS centers which will be catalysts for initiating research, education, and outreach activities in various parts of the country.

Provide initial seed funding for the establishment of IKS Centers in various HEIs. Provide additional funding to establish global Centers of Excellence in focused areas.

**Promote Jan Bhagidari:**

Reach out to public through various mechanisms (MyGOV competitions, conferences, exhibitions, programs on radio and television, social media, etc) to disseminate and popularize authentic IKS knowledge to develop informed and confident citizenry.

Involve people in various IKS initiatives through Jan Bhagidari programs similar to citizen science initiatives.

**Create employment opportunities:**

Create employment opportunities for youth through skill based IKS based programs such as IKS based beautician and cosmetician training programs, Ayurveda based dietician programs, Gandhashastra based perfumery, among many uniquely IKS based skills.

Promote heritage technology by bringing technology solutions to showcase the Indian heritage to Indians and the world. Aim to capture 10% of the world tourism market and provide massive employment opportunities to our youth.

**Conclusion:**

IKS includes knowledge from ancient India and, its successes and challenges, and a sense of India's future aspirations specific to education, health, environment and indeed all aspects of life. Indian knowledge system aims to support and facilitate further research to solve the contemporary societal issues in several fields such as Holistic health, Psychology, Neuroscience, Nature, Environment & Sustainable development. Indian Knowledge System (IKS) is an innovative cell established to promote interdisciplinary research on all aspects of IKS, preserve and disseminate IKS for further research and societal applications. It will actively engage for spreading the rich heritage of our country and traditional knowledge. The IKS will include tribal knowledge as well as indigenous and traditional learning methods which will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as governance, polity and conservation. This will not only promote tourism but also help in developing an awareness and appreciation of India's diversity, culture and traditions, as well as knowledge of various parts of the nation. It includes dissemination and imparting of knowledge of various dimensions of learning in the spheres of Universal human values, Vedic Maths, Yoga, Ayurveda, Sanskrit, Indian Languages, sacrosanct religious regions located in the Indian subcontinent, Archaeological sites and monuments, Heritage of India, Indian Literature, Indian Sculpture, Indian Music and dance forms, Drama, Visual Arts, Performing Arts, Crafts and Craftsmanship etc. Universities may introduce learner credits or IKS electives in all courses for imbibing learners across all disciplines with traditional knowledge and pride. UGC has already made it mandatory to include 5% of the total credits in the curriculum related to the IKS courses. Establish institutional support mechanisms through the establishment of the IKS centers which will be catalysts for initiating research, education, and outreach activities in various parts of the country.

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