



**LESSONS FROM INDIAN KNOWLEDGE SYSTEM (IKS) TO OUR STUDENTS
USING AI TOOLS- CHALLENGES AHEAD**

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ABSTRACT

Indian origin and its growth was mentioned in many texts of ancient India. The best source of Indian origin could be the Vedas and Upanishads. There are other texts like Puranas. Puranas are ancient Indian texts that are considered an integral part of Hindu mythology. For example: Vishnu Purana. Puranas came to lime light later after the Vedas. The Vedas were the oldest scriptures (1500BCE-500BCE) mentioned in other contemporary texts to validate the rich traditional knowledge system that led Indians to lead, live and love humanity and to survive later as a nation. The Vedas were written in Vedic Sanskrit and contain hymns, prayers, rituals and discussions. Upanishads, on the other hand were written between 800 BC to 400 BCE. The Upanishads are believed to be the extension of Vedas. The ancient gurukula imparted education based on the hymns; prayers ; commerce ; horse riding; archery ; knowledge in astronomy etc. Gurus in Gurukulas imparted lessons from these Vedas. The knowledge about the self- consciousness; duties on oneself-love for parents were taught. The Upanishads focus on knowledge(jnana).meditation (dhyana) and liberation ,(moksha) emphasizing the internal realisation of truth (Prof.T. Mrunalini).Upanishads are the branches of Vedas like in each Veda you have, Samhitas; Brahmanas ; Aranayakas and Upanishads, it is believed that Upanishads existed in 800B.C to 500B.C . Today,

children have curriculum to follow – it was believed that there is a gap between the wisdom gained from the ancient wisdom system and the present knowledge learned through or in schools sometimes by watching Videos and T.V. The National Education Policy (NEP) 2020 of India emphasizes integrating Indigenous knowledge systems (IKS) and community outreach to foster holistic student development while keeping them connected to their cultural roots. The methods I follow is survey and the interview to write full paper, The study of the texts books; the curriculum from primary to tertiary .university education etc. Many have criticized or argued the IKS division promoted fringe pseudoscientific and pseudo-historical views. (EDU TRACKS) Manasi Thapliyal has criticized the IKS curriculum as not being genuinely de- colonial, stating that” indigenous knowledge education or de- colonization projects begin with a critical dialogue with history and with dominant forces that have shaped modern disciplines’, because of IKS curricula lack such critical engagement,’ the whole project essentially boils down to becoming one of indoctrination’; This paper is an innovation in the area of or Indian Knowledge System. --with the title; Lessons From Indian Knowledge System (IKS) to Our Students Using Artificial Tools- Challenges Ahead.

Key Words: Upanishads; knowledge; Meditation: self; Gurukula

My Research questions are:

- 1 Why Indian knowledge system is the need of the hour?
- 2.Does curriculum of high school and other courses reflect Indian Knowledge system
- 3.How can AI help students understand Indian Knowledge System.
- 4.How AI has roots in Indian knowledge system ?
- 5.What are the challenges of using AI in primary schools.
- 6.To identify different stories of epics mentioned in textbooks.

(1) Introduction :

The Origin of Human Race and Indian Knowledge system:

In Hindu mythology and Vedic tradition, the seven Rishis (Sapta Rishis) sapta means seven and Rishi means sage, held responsible for procuring Indian Knowledge system. The “saptarishis” played the role of patriarchs of the Vedic civilization. They are (1) Marichi The son of Brahma and the father of Kashyapa. (2) Atri, the son of Brahma and the father of Durvasa and Chandra (3) Angiras: the son of Brahma and the father of Agni and the Angirasa clan (4) Pulaha the son of Brahma and the father of Pulaha clan, (5) Krathu, the son of Brahma and the father of Krathu clan, (6) Vasishtha the son of Brahma and the father of Vasishtha clan (7) Kahhyapa, The son of Marichi and the father of the Devas, Asura, Nargis and other beings. (Meta AI)

Saptarushi's contribution:

- 1) The creation of the universe: saptarish helped Brahma create universe. (Meta AI)
- 2) Vedic knowledge transmission: preserving and transmitting Vedic knowledge and traditions. (Meta AI)
- 3) The establishment of the Vedic civilization and social and cultural norms. (Meta AI)

Views on Indian Knowledge System :

The multiplicity of the manifestations of the Indian genius as well as their fundamental unity gives India the right to figure on the first rank in the history of civilized nations. Her civilization, spontaneous and original, unrolled itself in a continuous time across at least thirty centuries, without interruption, without deviation. - **Sylvian Levi (French Orientalist)** video, Prof. Kannan; VajiRam and Ravi.

David Thoreau, Henry -

In the great teaching of the Vedas, there is no touch of sectarianism. It is of all ages, climes, and nationalities and is the royal road for the attainment of the Great knowledge - American philosopher, unitarian social critic. Video (Prof. Kannan) VajiRam and Ravi. According to Kautilya, Edn, shall aim at three outcomes as characteristics, in learners, creation of new knowledge; wisdom to use the right knowledge in right time and place for right purpose.

Charaka Samhita, has medicine for sinusitis, piles, migrain, and other simple ailments. Charaka Samhita talks about Prana Vayus, the also about, Prana Vayus are the subcategories of Vata Dosha. Prana by itself means vital life force energy. Prana vayu means, the movement of prana or vital life changing its position from head, chest and other parts of body. (Sri Bhaskara Kerala Ayurvedic hospital, site) (1) Vayu (2) Prana (3) Apana (4) (Samana) 5 (Udana) 6 (Vyana,)

The importance of 6TH CENTURY BC.:

The 6TH Century B.C witnessed a kind of emancipation in the history of the world including India (Annapa Reddy Venkateshwar Reddy) In India, Buddha was born, In China Confucius; Lao Tze, Persia Zarathustra Pythagoras. Isaiah, Judea. Buddha was born in 567 BC. and had died in 486 ((473) others believe that he was died in 473 B.C. He sat under the tree for 49 days in Padmasana and finally it was said that he fought with different deities and later on became Buddha.

The Indian education system produced great scholars (2020 NPE) such as Aryabhata, Bhaskaracharya, Charaka, Chanayka, Chakrapani Datta, Gautama, Gargi, Maithreyi, Madhava, Nagarjuna, Paninni, Pathanjali, Pingala, Shankaradev, Thiruvalluvar, among numerous others. An abstract is given at the below to find out their contributions. The fields or knowledge systems they made seminal contributions are (1) Astronomy (2) Architecture (3) Chess (4) mathematics (5) metallurgy (6) medical science and surgery (7) Civil engineering (8) Navigation (9) ship building (10) yoga (11) fine arts etc. For example, to teach Civil engineering, we have colleges to teach, an entrance exam is conducted and students are drawn. The knowledge of civil engineering is useful in construction of buildings; bridges ; roads; airports and other useful infrastructure. Where do you think they learnt all these things? Some in institutions and other people using primitive technology.
source ; Laxmi.

Name of the Veda/ sub division	Nature of Texts	Time/ Period
Rigveda: Samhita Brahmanas Aranyakas Upanishads	Mention about rural and urban culture	c. 1500–1200 BC
Samaveda: Samhita Brahmanas Aranyakas Upanishads	These are all hymes, rituals	c. 1200–900 BC
Yajurveda: Samhita Brahmanas Aranyakas Upanishads	Veda of Melodies or the song of Hinduism	c. 1200–900 BC
Atharvaveda: Samhita Brahmanas Aranyakas Upanishads	Atharvaveda repeats many Rigveda hymns, together with charms and spells which go back to remote antiquity.	c. 900–500 BC

sno	Name of the scholar	Time of presence	Contribution area	Remarks
1	Aryabhata	(476–550 CE)	maths	He accurately calculated the circumference and explained the causes. He composed a book Aryabhatiya of Astronomical studies.
2	Charaka https://www.britannica.com/topic/Charaka-samhita	2BCE – 2CE	CharakaSamhita	Father of Indian medicine
3	Chanakya; Well versed in vedas and politics.	375 BCE-283BCE	Chanakya neethi and Arthasastra	Maurya Teacher ;philosopher ;jurist; chief advisor; economist; PM
4	Sushruta https://en.wikipedia.org/wiki/Sushruta		Plastic surgery; obstrecian; gyeocologist	Father of plastic surgery
5	Chakrapani Datta			
6	Gautama	567 - 486(473)		
7	Pingala			
8	Shankaradev			
9	Gargi	9th to the 7th centuries B	Brahmin sage	Vachaknu/ king janaka
10	Yagnavalka	8-7 century B.CE	Brahmin sage	King Janaka was known so just because of Mithila rulers and Vaidheha

Sl no	Name of the university	Period of flourish	Name of the ruler	remarks
1	Takshasila	5 th CE	the Indian "father of medicine" and one of the leading authorities in <u>Ayurveda</u> , is also said to have studied at Taxila, and practiced there. ^{[2][22]}	Present Punjab and pakisthan Chandra gupta Maurya studied here in for 8 years. Sciences arts, and military sciences
2	Nalanda	Mid 5 th century CE	18 Vidya stanas were part of learning at Nalanda	
3	Vikramashila	Late 8 th century CE		
4	Vallabhi https://en.wikipedia.org/wiki/Valabhi_University	600CE to 1400CE	Hinayana Buddhism	

Hiuen Tsang, also known as Xuanzang, was a Chinese Buddhist, monk scholar, traveller, and translator. He travelled from China to India to obtain Buddhist scriptures during the reign of King Harsha Vardhan. He is best known for his journey to India from 629 to 645 CE and his efforts to bring over 657 Indian texts into China. His translations of some contemporary texts provide valuable insights into India's history, culture, and religion at the time. Hiuen Tsang is also revered in China as a great scholar who helped establish the field of Buddhist studies. His writings had a significant impact on the development of Buddhism in China.

When Xuanzang visited the university in the middle of the 7th century, more than 6000 monks were studying in the place. Some 100 monasteries were provided for their accommodation. The citizens of Valabhi, many of whom were rich and generous, made available the funds necessary for running the institution. The Maitraka kings, who ruled over the country, acted as patrons to the university. They provided enormous grants for the working of the institution and equipping its libraries.

(Aparna Rajhans) in her article ‘ Guru shisya Parampara – Indian Reflections “ A teacher in Gurukul has the potential to inspire the students . The Vedic seers were great educationalists. They treated their students with great affection.

In the 18th century, dated *Manusmriti* to around 1250 BCE and 1000 BCE respectively, which, from later linguistic developments, is untenable due to the language of the text which

must be later than the late Vedic texts such as the Upanishads, themselves dated a few centuries later, around 500 BCE.

Patanjali was an author, mystic and philosopher in ancient India. He is believed to be an author and compiler of a number of Sanskrit works. The greatest of these are the Yoga Sutras, a classical yoga text.

The name Kapila appears in many texts, and it is likely that these names refer to different people. The most famous reference is to the sage Kapila with his student Āsuri, who in the Indian tradition, are considered as the first masters of Samkhya school of Hindu philosophy. While he pre-dates Buddha, it is unclear which century he lived in, with some suggesting 6th-century BCE. Others place him in the 7th century BCE. This places him in the late Vedic period (1500 BCE to 500 BCE), and he has been called a Vedic sage.

Kapila is credited with authoring an influential sutra, called Samkhya-sutra (also called Kapila-sutra), which aphoristically presents the dualistic philosophy of Samkhya. These sutras were explained in another well studied text of Hinduism called the Samkhyakarika. Beyond his Samkhya philosophy, he appears in many dialogues of Hindu texts, such as in explaining and defending the principle of ahimsa (non-violence) in the Mahabharata.

How Indian Knowledge system was preserved in Anno Domini

Kabir Das was a 15th-century Indian mystic poet and saint, whose writings influenced Hinduism's Bhakti movement and his verses are found in Sikhism's scripture Guru Granth Sahib and Kabir Sagar.

- Born: 1398, Varanasi, india
- Died: 1448, Maghar, india
- Children: Kamaali, Kamaal
- Important works: Susman, Nastik

What is the purpose of Establishment of IKS under the Supervision of Ministry of Education.

The origin of Indian Knowledge System, is not so long, the concept emerged from the scholars and scientists that met on 18th March, 2020, under the Minister for Human resource Development, Shri Ramesh Pokhriyal and other eminent faculty ,academicians. It was emphasised to include and integrate Indian knowledge system into school level, college level, University education level. It was stressed that it should go with National Credit Frame work and can be worked out with diversified courses or systems ; maths in Social; yoga in all courses. And, architecture, fine arts, etc in curriculum of all levels.(Adil)

Which Indian Policy mentioned or gave importance to Indian Knowledge System:

NEP 2020 is the unique education document stands separate from its earlier ones in many respects. Starting from the structure of schooling to multidisciplinary nature of the courses to holistic education to Goal 4(SDG4) of the 2030 agenda for Sustainable Development to venture into an education system by 2040 that is second to none. It has the light of the Indian Knowledge system to guide the document and also to guide the contemporary individuals of India to help students to achieve their goals. The mention of SDG4 upon India's traditions and strong ethics and value system which is the pride and diverse and rootedness from its ancient pages to modern culture to achieve the vision of 2040 education system which is second to none(NEP-2020 Pages from 1-5) The interpretation to IKS is (NEP 2020) Jnan; Pragyaa and truth (satya) . (NEP 2020) said should be the highest aim to all individuals of all walks of life. NEP talked about Indian Knowledge as sacred,

ancient/ eternal and had been the guiding light to incorporate all these recommendations so as to integrate all recommendations into curriculum; pedagogy and other forms of folklore and Indian philosophy and knowledge systems are deep rooted in Vedas and other sacred texts for further transmission as a legacy to coming generations.

HOW ARTIFICIAL INTELLIGENCE (AI) IS HELPFUL IN DESSIMINATION OF INDIAN KNOWLEDGE SYSTEM:

Artificial Intelligence is defined as a machine's ability to stimulate an intelligent person's work.

Artificial Intelligence (AI) and technology are not the same. Understanding the existing differences is essential for any student or teacher. AI is a branch of technology, but not all technology is AI. AI tasks are problem-solving, learning, and understanding language. AI systems use algorithms and data. They improve over time through machine learning. AI influences to mimic human cognitive functions. Its attributes includes, learning and adaptation; Decision making; Natural language processing and Automation of tasks. (AI Tech Café) .Computer ; internet ; smart phones software applications all fall under technology. Smart Phones are used for communication, internet browsing and social media. Computers are for essential work, gaming, and online shopping, Few smart watches monitor health and fitness devices.

It is believed that Chat GPT can help learners develop their writing skills. The benefits of Chat GPT are; can analyze, structure, spelling, punctuation with feedback. It is mentioned in the article written by (Tannistha Das Gupta and Renuprasad Patki) Chat GPT has few limitations, continuous supervision is a must to overview students engagement with Chat GPT. It is observed that ChatGPT is not an replacement for human teachers, -5but could serve as a complement to teachers and students expertise and guidance. The content generation with regard to ancient knowledge may have slight difference with that of AI what's app. The present version is GPT -3.5 it should have vast amounts of data, to train the model (Hadi et al., 2023)

The one particular controversy is about the quality of response generated, without any bias, furthermore, to integrate Chat GPT responses for any assignments, the teacher and the students to understand the accuracy, relevance and completeness so as to follow up prompts (Lingard, 2023)

The different engagement with Chat GPT needs, a separate computer, Laptop, or a cell phone One should have account to operate . Mostly students get astonished at its service by the way it answers; they take or copy or download and submit the assignments, there is no consistency while evaluation.

AI tools are preferred at work place also, hence in view of this (Ozcelik and Eksi.2024) it advised to allot some time for interacting with Chat GPT. We hear in most of the technology updates- Boss would blast you if you don't use technology and generate output.

AI enhances Creativity and Generation of content

Generative AI: Advancements in generative models, such as GPT (Generative Pre-trained Transformer) variants, are enabling machines to create high-quality content, including text, images, and music. This trend is set to reshape content creation and creativity.

AI-powered Creativity: AI is not limited to data processing; it's also becoming a creative force. From generating art to composing music, AI is expanding the boundaries of human creativity.

Running Vehicles using AI and Intelligent Transport

Autonomous Vehicles: The integration of AI in autonomous vehicles is at the forefront of transportation innovation. These vehicles leverage AI algorithms to perceive their environment, make real-time decisions, and navigate without human intervention. The promise of safer roads, reduced accidents, and improved traffic flow propels ongoing research and development in the automotive industry.

Intelligent Traffic Management: AI is reshaping traditional traffic management systems, paving the way for intelligent traffic management in smart cities. These systems leverage data from various sources, including sensors, cameras, and connected vehicles, to optimize traffic flow, reduce congestion, and enhance overall transportation efficiency.

Hover craft robotics

Challenges ahead of incorporation in curriculum:

The writer if are allowed to prepare textbooks! How much AI can assist them?. The digitalisation of Libraries, (Rahul Kumar), in his article “ From Manuscripts to Metadeta,- Technological Innovations in the Conservation of Cultural Heritage talks about ‘ Importance of Preserving ancient knowledge; Evolution of Cultural Heritage Conservation ; Traditional methods of conservation and emergence of scientific conservation – in conclusion he says- Technology plays a transformative role in the preservation and conservation of Indian Knowledge system- The books of ancient texts , and manuscripts -artefacts; digitalised are made ready to disseminate the Indian Knowledge System. Scholars are of the opinion that ethical considerations, issues, should be addressed on a regular basis to maintain inclusivity and cultural sensitivity.

National Curriculum Framework: (NCF) it strives to incorporate all the changes mentioned in NEP 2020.NCF aims to target holistic overall transformation of the curriculum , Pedagogy ,that will enable the teachers to positively transform over all learning experiences for students (Objectives- of this NCF.pafe no-12)

We cannot offer major disciplines with the name of diversified courses. All the technical terms and references from the Sanskrit sources should be given in the Devanagari lipi or script.(Adil) as well as in English translations for any course materials prepared in English. The guiding principles for translations should be spelled out. The content writers using AI and the students using Chat GPT for content generation needs to be careful about the data. This is for both the translation services. Job selection procedures, now- a- days we see that the ones with the knowledge of AI are given importance.

Conclusion:

Wisdom is happiness? Charvaka, (Annapareddy Venkatshwara Reddy) Charvaka, in ethics, had stressed the relativity of behaviour. Happiness, cannot be found through spiritual endeavours (exercises) rather it should be sought through the senses,(Nirmal Kaur).Teaching happiness is the one of the aims of education in the Vedic period. Apart from this, was about consciousness and the self. At least to get the glimpse of the discussions among Yagnavalka, Maitreiyee, and other sages at those times the technology would be helpful but to teach the Indian Knowledge system using CHAT gpt should be cross checked. IKS is a collective range of Indian knowledge that has exhibited in different methods of knowing. Prof. Shrinivasa Varakhedi, says Indian knowledge is spread as spectrum. There is a vast repository of knowledge available in all native languages. This has been remained unexplored for decades.

He further says, to make IKS part of the mainstream Education, he suggested, amalgamation of fundamental IKS concepts into modern textbooks, and finally developing Indian thought Models based on available IKS literature, and their application into various contemporary problem solving methods

The year 2024 holds immense promise for the continued evolution of **AI and ML** technologies. These trends are not only reshaping industries but also influencing the way we live, work, and interact with the world around us. As we navigate this era of technological transformation, staying informed and adaptive is key to unlocking the full potential of AI and ML in shaping a brighter and more innovative future. The useful or collaboration among Technologists; Historians; cultural institutions needed - . Public Private partnerships etc need to be encouraged.(Rahul kumar)

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