The Indian Knowledge System (IKS) represents an extensive and ancient intellectual tradition that harmoniously blends spiritual wisdom with scientific thought. It offers valuable insights for tackling modern challenges such as climate change, environmental degradation, and the pursuit of sustainable development. The system encompasses multiple disciplines—mathematics, medicine (Ayurveda), astronomy, philosophy, yoga, architecture, and the arts—forming a holistic framework of knowledge. Its significance lies in providing ethical and inclusive solutions, protecting cultural heritage, fostering innovation, and generating sustainable economic and educational opportunities through research and integration into contemporary learning.

Scope of the Indian Knowledge System

IKS is a broad and interdisciplinary domain covering various fields of human understanding:

Sciences and Mathematics:
Ancient Indian scholars introduced fundamental concepts such as zero and binary numbers and developed practical approaches to problem-solving that laid the groundwork for modern scientific methods.

Health and Well-being:
Ayurveda promotes a holistic approach to health by balancing the body, mind, and spirit, while Yoga enhances mental focus and spiritual growth through postures (asanas) and breath control (pranayama).

Arts and Culture:
IKS includes rich literary and philosophical traditions reflected in classics like the Ramayana, Mahabharata, and Bhagavad Gita. It also explores linguistics, aesthetics, and the philosophical connections between language, thought, and reality.

Engineering and Architecture:
Traditional Indian architectural and engineering practices demonstrate advanced structural design and sustainability principles, evident in the enduring monuments and temples of ancient India.

Agriculture and Environment:
Indigenous farming practices emphasize ecological harmony through organic cultivation, natural

farming methods, and tribal knowledge related to forest conservation and herbal medicine.

Governance and Ethics:
Ancient Indian political and ethical systems provide insights into good governance, justice, and inclusive social development grounded in moral philosophy.

Relevance of the Indian Knowledge System

The Indian Knowledge System remains vital in the modern world for several reasons:
Solving Contemporary Issues:
IKS offers innovative and practical perspectives on environmental protection, health care, and sustainable development rooted in ethical and holistic thinking.
Encouraging Innovation:
By blending traditional wisdom with modern science, IKS inspires cross-disciplinary research and innovation across diverse fields.

Promoting Sustainable Living:
Its principles emphasize harmony between humans and nature, encouraging responsible use of resources and balanced physical, mental, and spiritual well-being.

Preserving Cultural Identity:
Integrating IKS into modern discourse safeguards India's cultural heritage and strengthens the Bhāratiya Drishti—the Indian worldview.

Educational Integration:
Incorporating IKS into modern education helps create well-rounded learners who appreciate both traditional wisdom and contemporary knowledge.

Economic and Employment Growth:
Fields rooted in IKS—such as Ayurveda, traditional crafts, natural perfumery, and eco-friendly agriculture—can drive entrepreneurship and generate new livelihood opportunities.

Sources of the Indian Knowledge System (IKS)

The Indian Knowledge System (IKS) refers to the vast and ancient body of knowledge developed in the Indian subcontinent over thousands of years. It encompasses

philosophy, science, art, architecture, medicine, mathematics, astronomy, politics, ethics, and spirituality. Its sources are primarily the Vedas, Upavedas, Vedangas, Puranas, Smritis, Itihasas, and various Shastras that form the foundation of Indian intellectual tradition.

1. The Vedas — The Primary Source of Indian Knowledge The Vedas are the earliest and most authoritative scriptures of Indian civilization, considered Apaurusheya (not of human origin) and Shruti (that which is heard). They form the root of all branches of knowledge — spiritual, moral, and scientific. The Four Vedas Veda Main Subject/Focus Key Contents Rigveda Hymns and prayers to various deities; philosophical ideas Collection of 1,028 hymns (suktas); earliest record of human thought Yajurveda Rituals and sacrificial formulas Procedures for yajnas (sacrifices); divided into Shukla (White) and Krishna (Black) Yajurveda Samaveda Music and chants Verses mostly from Rigveda, set to melody; foundation of Indian music Atharvaveda Everyday life, medicine, healing, and social laws Deals with charms, remedies, social norms, medicine, and philosophy Structure of Each Veda Each Veda is divided into four parts:

1. Samhita – Hymns and mantras
2. Brahmana – Explanation of rituals and ceremonies
3. Aranyaka – Forest texts for meditation and reflection
4. Upanishad – Philosophical and spiritual knowledge (Jnana Kanda)

2. Upavedas — The Applied Sciences of the Vedas The Upavedas are considered secondary knowledge systems derived from the Vedas, focusing on practical disciplines and applied sciences. Upaveda Associated Veda Field/Subject Ayurveda Atharvaveda Science of life, health, and medicine (Charaka Samhita, Sushruta Samhita) Dhanurveda Yajurveda Science of warfare, archery, and martial arts Gandharvaveda Samaveda Science of music, dance, and aesthetics Arthashastra (sometimes called Shilpaveda) Atharvaveda Science of polity,

economics, and governance (Kautilya's Arthashastra) ---

3. Vedangas — The Auxiliary Disciplines The Vedangas ("limbs of the Vedas") are six branches of study developed to support the correct understanding, interpretation, and preservation of the Vedas. Vedanga Subject/Area Purpose Shiksha Phonetics Correct pronunciation and recitation Vyakarana Grammar Correct use of language (Panini's Ashtadhyayi) Chandas Prosody Study of poetic meters Nirukta Etymology Explanation of difficult Vedic words (Yaska's Nirukta) Kalpa Ritual rules Procedures of rituals and duties (Sulba Sutras, Grihya Sutras)

Jyotisha Astronomy and astrology Determining auspicious times for rituals and activities

4. Itihasa — Epics as Historical and Ethical Knowledge The Itihasas (meaning "so it happened") present historical, moral, and spiritual teachings through narratives. Major Itihasas
1. Ramayana – Written by Sage Valmiki; teaches Dharma, ideal conduct, and moral life.
2. Mahabharata – Written by Sage Vyasa; the world's longest epic, containing the Bhagavad Gita — a philosophical dialogue on duty, action, and self-realization. These texts are not only historical but serve as guides for ethical and social conduct.

5. Puranas — Encyclopedias of Indian Knowledge The Puranas (meaning "ancient") are a vast collection of stories and teachings that expand upon Vedic and Upanishadic ideas, making them accessible to the general public. Major Puranas (18 Mahapuranas)
1. Vishnu Purana
2. Bhagavata Purana
3. Brahma Purana
4. Padma Purana
5. Shiva Purana
6. Linga Purana
7. Agni Purana
8. Skanda Purana
9. Vayu Purana
10. Markandeya Purana
11. Kurma Purana
12. Matsya Purana
13. Varaha Purana
14. Garuda Purana
15. Brahmanda Purana
16. Brahmavaivarta Purana
17. Narada Purana
18. Vamana Purana

6. Upanishads — The Philosophical Core
The Upanishads mark the culmination of Vedic thought (Vedanta). They focus on spiritual realization, self-knowledge (Atma Jnana), and the unity of Brahman (ultimate

reality) and Atman (self). Major Upanishads: Isha, Kena, Katha, Prashna, Mundaka, Mandukya, Aitareya, Taittiriya, Chandogya, Brihadaranyaka They form the foundation of Hindu philosophy, influencing later systems such as Yoga, Vedanta, and Sankhya. ---

7. Smritis and Dharmashastras

While the Vedas are Shruti (revealed), the Smritis are remembered texts, codifying rules for social conduct, law, and ethics. Important Smritis Manusmriti – Laws and duties of social classes Yajnavalkya Smriti – Law, justice, and ethics Narada Smriti – Judicial principles Parashara Smriti – Guidelines for social order during Kali Yuga These works became the foundation of ancient Indian law and social order. ---

8. Shastras and Darshanas (Philosophical Systems)

The six classical Darshanas (philosophical systems) reflect the logical and spiritual depth of IKS. System Founder Core Idea Nyaya Gautama Logic and epistemology Vaisheshika Kanada Atomism and natural philosophy Sankhya Kapila Dualism of Purusha (consciousness) and Prakriti (matter) Yoga Patanjali Union of body, mind, and spirit Purva Mimamsa Jaimini Ritual philosophy of the Vedas Vedanta (Uttara Mimamsa) Vyasa Knowledge of Brahman as ultimate reality These systems collectively form the

philosophical backbone of Indian intellectual tradition. ---

9. Other Important Sources

1. Arthashastra – Political and economic science (Kautilya/Chanakya)
2. Natyashastra – Performing arts and aesthetics (Bharata Muni)
3. Sushruta Samhita & Charaka Samhita – Foundational texts of Ayurveda
4. Sulba Sutras – Early geometry and mathematics
5. Jyotisha Siddhantas – Astronomy and time calculation
6. Agamas & Tantras –

Ritual, temple architecture, and spiritual practices --- Conclusion The Indian Knowledge System is a holistic synthesis of spiritual wisdom, scientific inquiry, ethical conduct, and artistic expression. Its sources — the Vedas, Upavedas, Vedangas, Puranas, Itihasas, Smritis, and Shastras — together form a complete and timeless framework of human understanding, integrating science, philosophy, and spirituality for the betterment of individuals and society.

Communication in Ancient India —

Communication in ancient India was deeply rooted in oral, visual, and symbolic traditions that transmitted knowledge, values, and culture across generations. Long before modern communication systems emerged, India had developed a highly sophisticated network of interpersonal, mass, and administrative communication, which was spiritual, educational, and political in nature. Communication in ancient India was not merely the exchange of information — it was a medium to preserve culture, spread

dharma (righteousness), and strengthen social unity. ---

A. Oral Tradition — The Foundation of Early Communication Key Features Orality was central to communication in the Vedic period. Knowledge was passed down through Guru–Shishya (teacher–disciple) tradition. The Vedas, Upanishads, and epics were memorized and orally transmitted for centuries. Modes of Oral Communication
1. Storytelling (Katha, Akhyana, Itihasa): Used to teach moral values, history, and religion. Example: Ramayana and Mahabharata recitations in village gatherings.
2. Public Recitations and Debates (Shastrartha): Scholars discussed philosophy, logic, and ethics in assemblies.
3. Folk Communication: Ballads, songs, drama, and dance were used to spread messages to the masses. Example: Jatra in Bengal, Kathakali in Kerala, Harikatha and Bhajan traditions. Importance Oral communication ensured accuracy through memorization techniques (e.g., repetition, chanting, rhythmic recitation). It created a shared cultural

identity and preserved the Indian knowledge system. ---

B. Written Communication and Script Development Early Scripts in India Harappan Script (2500–1500 BCE): Undeciphered; used pictographs and symbols for trade and administration.
Brahmi Script (from 4th century BCE): The earliest deciphered script, used in Ashokan inscriptions.
Kharosthi Script: Used in the northwestern regions (modern Pakistan/Afghanistan). Materials Used for Writing Palm leaves (Tala Patra) Birch bark (Bhoj Patra) Copper plates (Tamra Patra) Stones and pillars for inscriptions These materials helped in recording laws, trade records, religious texts, and royal orders, marking the transition from oral to

written communication. ---

C. Symbolic and Visual Communication
Ancient Indians used symbols, signs, and art as a medium of non-verbal communication. Examples Temple architecture and sculpture: Conveyed spiritual stories and philosophical concepts. Cave paintings (Ajanta, Ellora, Bhimbetka): Depicted life,

hunting, rituals, and beliefs. Yajna rituals, mudras, yantras, and mandalas: Visual expressions of religious and cultural ideas. Coins and seals: Used to communicate royal authority and trade identity. Such art and symbols acted as visual mass media, accessible even to the illiterate population.

D. Political and Administrative Communication

Kings and rulers in ancient India used structured systems of communication for governance, law enforcement, and diplomacy. Messengers and Couriers Known as Dutas or Sandeshvahak, they carried royal messages between states. The Rajdoot system ensured quick communication between rulers and provinces. Royal Announcements Important proclamations were made by beating drums (Nagada, Dundubhi) or by town criers (Prachara). Religious and moral edicts were often engraved in public spaces for the people to see. Use of Spies and Informants Ancient texts like Arthashastra by Kautilya describe an organized intelligence network for internal and external communication in administration.

E. Religious and Cultural Communication

Vedic Communication Priests acted as communicators between people and gods through chants and rituals. The use of mantras, symbols, and hymns communicated cosmic truths. Buddhist Communication Buddhist monks (Bhikshus) spread the teachings of Buddha through oral sermons, symbols (Dharma Chakra, Stupa), and storytelling (Jataka tales).

Monasteries (Viharas) served as centers of education and communication. Jain and Hindu Communication Jain monks used discourse (pravachan) and symbolic art to spread non-violence and truth. Hinduism used Katha, Puranas, and temple festivals as community communication tools.

F. Ashokan Edicts — The Earliest Example of Mass Communication Background Emperor Ashoka (273–232 BCE) of the Mauryan dynasty was the first Indian ruler to use written communication on a mass scale. After embracing Buddhism, he used inscriptions to spread messages of dharma (moral law), tolerance, and social welfare. --- Types of Edicts Ashoka's inscriptions were written in Prakrit language, using Brahmi and Kharosthi scripts (later also Greek and Aramaic in northwest India). Type Medium Purpose Rock Edicts Carved on natural rocks Spread ethical and moral principles Pillar Edicts Engraved on polished stone pillars Display royal orders and public welfare policies. Major Rock and Pillar Edicts

Rock Edicts

Major Rock Edict I–XIV: Found across India (Girnar, Dhauli, Kalsi, Jaugada, etc.) Topics include: Non-violence and respect for all religions Ban on animal sacrifices Moral conduct, compassion, and charity Instructions to officials (Rajukas, Pradesikas) to act with justice Promotion of Dhamma (universal moral code) Pillar Edicts Found at places like Sarnath, Sanchi, Topra, Delhi, and Meerut. Symbolized royal authority and moral

governance. The Sarnath Lion Capital (four lions back-to-back) became India's National Emblem. Messages include: Religious tolerance Equal treatment of subjects Appointment of Dhamma Mahamatras (officers for public morality) Welfare measures like planting trees, hospitals, rest houses, and wells --- Language and Communication Significance Used vernacular languages (Prakrit, Greek, Aramaic) — making communication accessible to common people, not just elites. Demonstrates an early form of public communication, civic instruction, and ethical governance — comparable to modern-day public information campaigns.

G. Educational Communication: Gurukul and Universities Education was the core medium of intellectual and moral communication in ancient India. Gurukul System Based on personal interaction between Guru (teacher) and Shishya (student). Emphasized oral learning, discipline, and holistic development. Ancient Universities Takshashila, Nalanda, Vikramashila, and Vallabhi were major centers of communication and knowledge dissemination. Students from across Asia studied science, medicine,

philosophy, grammar, and logic, making India a global communication hub. --- 8. Folk and Community Communication Folk forms preserved and communicated culture, values, and news to rural audiences. Medium Region Purpose Harikatha, Bhajan, Kirtan Pan-India Religious and moral storytelling Yakshagana, Kathakali, Burrakatha South India Educational entertainment Puppetry (Kathputli) Rajasthan Social awareness through stories Folk songs and dances All regions Communication of emotions, history, and festivals These were interactive, participatory, and localized — the earliest forms of "community media."

Conclusion
Communication in ancient India evolved from oral tradition to written inscriptions and symbolic media, integrating religious, political, artistic, and social dimensions. Ashoka's edicts stand as the earliest and most organized form of state communication, blending governance with moral education. Ancient Indian communication emphasized truth, ethical living, and harmony, setting a foundation for modern public communication and media ethics.

Indian Knowledge System (IKS) and Cultural Identity

The Indian Knowledge System (IKS) represents India's ancient and holistic body of knowledge — integrating philosophy, science, art, spirituality, and ethics. It has played a

vital role in shaping and preserving India's cultural identity through generations. ---
1. Reflection of Culture in Knowledge IKS is rooted in Indian culture, traditions, and worldview. It expresses the values of Dharma (righteousness), Karma (action), and

harmony with nature. Knowledge was not separate from life — it guided behavior, social

structure, and moral principles. ---
2. Preservation of Cultural Heritage Texts like the Vedas, Upanishads, Puranas, and epics transmit Indian philosophy, rituals, and languages. Art, music, architecture, and

Ayurveda are all expressions of cultural wisdom preserved through IKS. ---
3. Identity and Continuity IKS connects people to their historical roots and civilizational continuity. It builds a shared sense of belonging and pride in India's intellectual and moral traditions. The Guru–Shishya parampara, festivals, and oral traditions maintain

community identity. ---
4. Integration with Modern Context Reviving IKS in education helps bridge tradition with modern science and innovation. It promotes cultural confidence and self-reliance, encouraging India's identity in a globalized world.

Description and relevance of identified components

Panchkosh:
There are numerous personality theories that exist in psychology, including Western and Indian theories. The concept of personality developed in the Taittiriya Upanishad is a combination of physical, mental, intellectual, and spiritual dimensions. This Vedantic psycho-philosophical theory (Satpathy, 2018) of human personality describes five sheaths of personality that are Annamaya Kosha, Pranamaya Kosha, Manomaya Kosha, Vigyanmaya Kosha, and Anandmaya Kosha. To consider the Indian tradition in mainstream education, the National Curriculum Framework for Foundational Stage 2022 proposed to integrate Panchkosh theory for nurturing the holistic development of children (NCF-FS, 2022, pg. 19). Annamaya Kosha represents physical development that is characterized by growth of body parts, development of skills, and control of organs. Pranamaya Kosha is about pranic development, which is for control and regulation of impulses and restraints. Manomaya Kosha relates to the mental development that includes concentration, balance, and spirit. Vigyanmaya Kosha is intellectual development characterized by memory, perception, discretion, judgment, chance, prediction, observation, and the ability to differentiate. Anandamaya Kosha indicates spiritual development represented by love, joy, realization of abhaya, beauty awareness, creativity, and development of virtues (Panchal et al., 2023).
Triguna Theory: Many Indian scholars assume human personality contains physical, mental, and spiritual aspects (Singh et al., 2016).
Understanding of triguna theory takes into account a wider array of personality aspects that influence the identification of the traits of students. Triguna means three qualities, or gunas, of Prakriti, i.e., Sattva means balanced, Rajas means passionate, and Tamas

means dull. It is related to the physical, social, psychological, and spiritual aspects of personality. These three gunas are mentioned in Atharveda, and all gunas act together and determine the complete individual's personality (Dhulla, 2014). As certain gunas demonstrate specific qualities in behavior, it depends on the dominance of guna in an individual. Sattva is defined as humility, intelligence, goodness, purity, knowledge, peace, stability, self- awareness, sensitivity, control, and harmony. It is also conceptualized as clearness, truth, determination, discipline, and detachment (Singh et al., 2016). Rajas is conceptualized as impure, bad, a lack of control over emotions, passionate, anxious, desirous, and greedy. Rajas theorized overactivity, dissatisfaction, materialistic mentality, and extraverted instability. Similarly, tamas is defined as neutrality, fear, sorrow, lethargy, low self-confidence, low self- respect, mental imbalance, anger, arrogance, procrastination, and inertia.

Ashtanga Yoga: Sage Patanjali is the originator of yoga philosophy and compiled the Yoga Sutra. Patanjali's Yoga Sutra propounds the Ashtanga Yoga, or the yoga having the following eight angas, or limbs: Yamas (social observances), Niyamas (personal observances), Asanas (steady and comfortable postures catering primarily to physical and physiological health), Pranamaya, Pratyahara, Dharana, Dhyana, and Samadhi. Ashtanga Yoga of Patanjali is holistic in that it caters to the social, physical, physiological, mental, intellectual, and spiritual dimensions of human personality (Rao, n.d.). The practice of Ashtanga Yoga purifies the mind of negative ideas or behaviors and cultures oneself towards positive behavior through Yama (Sahay, n.d.). Niyama represents discipline (Sharma, n.d.). The third limb of the system is Asana, which impacts the mind, making the mind calm and quiet, facilitating emotional control and intellectual clarity with the practice of physical practice (Mehta, n.d.). Fourth limb pranayama helps to hold the vital force (Tiwari, n.d.). These are the Bahiranga yoga. Bahiranga yoga acts as a tool for the refinement of body and mind. Antaranga yoga (Pratyahara, Dharana, Dhyana, and Samadhi) brings about spiritual solace (Dhavale & Nimbalkar, n.d.). Integration of all Bahiranga yoga at foundational and preparatory education appears with the balanced and dynamic personality of the child.

Panchbhutas—
Human activity causes serious hazards to the environment, which threaten the lives of living beings. After a huge damage, humans have now awakened for the protection of the environment. In ancient India, nature, like air, water, earth, ether, and fire, was considered as gods. This shows that there is a need to preserve the environment, and it can be done using either spirituality or scientific reason. Both the methods are towards the protection of nature, life, and generation. This universe is made up of Panchmahabhut, which includes Akasha, Agni, Vayu, Jala, & Prithvi. As the National

Curriculum Framework for Foundational Stage 2022 suggests, early childhood is the right stage to introduce the Panchmahabhut by direct experience so that children can feel a connection with life. It also develops a lifestyle with the environment. It also helps to understand the attributes of Panchbhut that must be needed for an influential and potent personality. There are some foundational principles of Panchmahabhut. Prithvi stands for stability and solidity; Jala stands for cohesiveness and fluidity; Agni symbolizes transformation, passion, and enthusiasm; Vayu represents dynamism and movement; and last, Akasha stands for space, expansiveness, and consciousness.

Panchtantra, Jatak & Hitopadesh:

Before the invention of any modern electronic equipment like television or computers, listening to and telling stories was the most favorite pastime. Stories were used to pass on real events, history, family connections, and also as entertainment (Kulkarni, 2013). In India, since the Vedic age, there has been a tradition of oral education. Many stories in the ancient text were related to value education. NEP 2020 has emphasized the value of education. Value education is essential for good qualities in life and to develop positive human behavior. NCF- FS 2022 suggests giving students the opportunity to learn ethics and values from traditional Indian funfables and stories from Panchtantra, Jatak & Hitopadesh. Pandit Vishnu Sharma is the writer of the Panchatantra stories. Panchatantra stories help to teach the importance of honesty and integrity, the value of kindness and compassion, the importance of using their intelligence and wit, the consequences of their actions, etc. Hitopadesha, meaning "advice that can help," is a collection of stories that describe good and bad behavior. Hitopadesha is Sanskrit literature consisting of fables with bird and animal characters written by Pandit Narayan Bhatt. Preaching perspective in Hitopadesha shows the value of friendship, concentration, patience, service, the difference between good and bad, & pragmatic wisdom (Dave, 2018). Teachings of stories and precepts of Hitopadesha connect the matters of life and pragmatic wisdom with the current content. The Jatak word originates from the Sanskrit word 'Jaatak,' which means 'the story of birth. Jatak Katha is a collection of around 547 stories, which are about the life of Buddha. These stories depict Buddhist morality (Ubeysekara, 2021).Learning from the Ramayana & Mahabharata: Values of religious literature, text, and belief always help in sustaining the society and its culture. Ramayana & Mahabharat are great epics considered as ethical literature. The Ramayana & Mahabharata explore deep morality and the core of life. In modern Indian culture, there are epic role models of morality that still have an impact on moral behavior and ethical thinking (Maity & Mete, n.d.). Ramayana has influenced Indian society by its social and ethical principles, and the figures of Ram, Sita, Hanuman, and other characters have endured as timeless representations of morality and values. The Bhagavad Gita, part of the Mahabharata, gives the ethical and moral education of

duty, righteousness, and ethical dilemmas. In the Ramayana, the life of Ram presents the exemplar of ethical behavior. Exploration of Ramayana's teaching and discussions on the relevance of the Mahabharat foster a connection between modern life and ancient excellence (Maity & Mete, n.d.).

Purusarth: Purusharthas as values representing the Indian way of life (Ashok & Suman, 2015). Purushartha means objective of human being. Realizing the ultimate truth and spiritual values Indian ethos reflects the fourfold human objectives, i.e., Dharma, Artha, Kama, and Moksha. Dharma is supreme duty, artha indicates wealth or material, kama represents desires, and moksha is salvation or liberation (Singh, 2013). Dharma is a concept about human duty as an unseen result.

Panchadi: Panchadi is the five-step learning process that is recommended as a good way for a teacher to formulate the lesson plan for the sequence of activities and approaches that should be used to teach a child something. It recommends a teaching approach for children to experience, experiment, and explore. The 5 steps of Panchaadi are Aditi, Bodh, Abhyas, Prayog, & Prasar. Aditi: This initial phase involves the introduction of a new concept. It encourages connecting a child's existing knowledge with a new topic. Bodh: In this stage children develop their conceptual understanding. It inspires the elimination of ignorance. Abhyas: The third phase is practices, which emphasize the strengthening of skill theory through various engaging activities. Prayog: It focuses on applying the learning in real-life situations. Prasar: This stage encourages communication of acquired knowledge.