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Languageas Knowledge: Traditions, Transformations, and Contemporary Challenges

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Abstract

This article examines the centrality of Indian languages in the evolution of the Indian Knowledge System (IKS) and the paradox of their declining importance in the contemporary world. Historically, Sanskrit, Prakrit, Pali, and Tamil, along with regional vernaculars, served as the primary vehicles for transmitting spiritual, philosophical, scientific, and literary traditions—from the Vedas and Upanishads to Bhakti poetry, Sangam literature, Ayurveda, mathematics, and the arts. These languages not only safeguarded knowledge but also democratized it through oral traditions, folk narratives, and vernacular expressions. However, in the present academic and professional landscape, languages are increasingly marginalized. Core domains such as science, medicine, and technology often bypass linguistic heritage, reducing languages to secondary or ornamental roles rather than recognizing them as knowledge-bearers. The chapter also considers contemporary educational policies and language conservation initiatives, urging a re-centering of languages within interdisciplinary frameworks. By bridging tradition and modernity, it underscores that without linguistic vitality, the richness of IKS risks fragmentation and loss.

Key words: Languageas Knowledge, Traditions, Transformations, Contemporary Challenges, science, medicine

Introduction

Indian languages are captured in a diverse collection of texts, scriptures, and oral traditions that cover spiritual, literary, scientific, and philosophical fields. Each format—be it written or spoken—constitutes a fundamental element of the Indian Knowledge System (IKS) and emphasizes the crucial role of language in safeguarding and passing down knowledge through the ages. Below are significant texts, scriptures, and oral traditions that showcase the richness of Indian linguistic learning:

1.0 Vedas and Oral Traditions¹

4.1.0 Rigveda: The Rigveda, regarded as one of the oldest known written works in human history (approximately 1500 BCE), was passed down orally for centuries in Vedic Sanskrit before being inscribed. Its hymns honor deities, convey cosmological concepts, and offer valuable insights into early linguistic frameworks and poetic styles.

4.1.1 Sama Veda, Yajur Veda, and Atharva Veda: These texts, which together form the Vedic corpus,

address various spheres of knowledge, ranging from rituals to ethical principles and cosmological views. They were memorized and recited using distinct phonetic patterns to ensure linguistic precision, reflecting the oral tradition that is central to Indigenous Knowledge Systems (IKS).

4.1.2 Vedangas: These supplementary disciplines associated with the Vedas consist of Shiksha (phonetics), Vyakarana (grammar), and Nirukta (etymology), establishing a grammatical and phonetic basis for both Vedic and subsequent texts. They highlight the critical role of linguistic structure and accuracy in the oral transmission of knowledge.

1.1 Upanishads¹

Philosophical Conversations and Inquiry Language: The Upanishads (approximately 800–400 BCE) mark a pivotal shift from the ritual-oriented Vedic texts to philosophically rich dialogues, composed in both prose and poetry.



They are commonly viewed as the spiritual and philosophical foundation of Indian philosophy, examining the essence of existence, the self (Atman), and the ultimate reality (Brahman) using a distinctive Sanskrit vocabulary.

Oral-Dialectical Structure: Numerous Upanishads are organized as conversations between a teacher and a student, a format that promoted oral learning and made philosophical exploration more approachable through the incorporation of metaphors, narratives, and analogies.

1.2 Epics and Puranas

4.3.1 Ramayana and Mahabharata: These two epic stories, composed in Sanskrit and credited to Valmiki and Vyasa, respectively, are essential for comprehending the narrative and linguistic depth of Indian literature. The Mahabharata, in particular, encompasses the Bhagavad Gita, which serves as both a spiritual and philosophical work presented in a dialogic format, nurturing a tradition of oral and ethical education.

4.3.2 Puranas: Texts like the Vishnu Purana and Shiva Purana delve into mythology, cosmology, and historical narratives, significantly influencing the collective consciousness of India. Composed in classical Sanskrit, the Puranas also weave in local legends and linguistic elements, making them relevant to various linguistic communities.

1.3 Buddhist and Jain Texts in Prakrit and Pali

Pali Canon (Tripitaka): Fundamental to early Buddhist teachings¹, the Pali Canon comprises the Buddha's doctrines organized into three sections (Pitakas): Vinaya (rules for monastic conduct), Sutta (teachings), and Abhidhamma (philosophical insights). The choice of Pali over Sanskrit demonstrates the Buddha's inclination towards local languages, making religious knowledge more accessible and establishing Pali as a vital language for both monks and laypeople.

Jain Agamas and Prakrit Literature: Jain scriptures, notably the Agamas, are composed in Ardhamagadhi Prakrit, enhancing their accessibility for the general population. These writings focus on principles of non-violence, ethics, and spiritual

practices, utilizing the Prakrit language to connect the Sanskrit-educated elite with everyday individuals.

1.4 Classical Sanskrit Literature and Grammar^{III}

Panini's Ashtadhyayi: Authored by Panini around the 4th century BCE, this important text is recognized as the cornerstone of Sanskrit grammar. The *Ashtadhyayi* articulated grammatical principles in an algorithmic manner, shaping linguistic studies globally. It provided a structured protocol for Sanskrit, positioning it as a precise and effective medium for scientific and philosophical discourse.

Kālidāsa's Works: Dramatic and poetic contributions from Kālidāsa, such as *Shakuntala* and *Meghaduta*, epitomize the pinnacle of classical Sanskrit literature. These works embody aesthetic and emotional richness, highlighting the expressive capacity of Sanskrit and serving as essential texts in the study of arts and literature.

Sanskrit Kavya (Poetry) and Dramas: The kavya literature and theatrical pieces by writers like Bharavi, Bhavabhuti, and Bhasa played a significant role in the evolution of Sanskrit literature, illustrating stories that resonated with human feelings, philosophical concepts, and cultural values.

1.5 Buddhist and Jain Texts in Prakrit and Pali

Pali Canon (Tripitaka): Fundamental to the foundational teachings of Buddhism, the Pali Canon organizes the Buddha's teachings into three categories (Pitakas): Vinaya (rules for monastic conduct), Sutta (sermons), and Abhidhamma (analytical philosophy). The choice of Pali over Sanskrit highlights the Buddha's intention to use local languages, making spiritual wisdom accessible and establishing Pali as a medium of learning for both monks and laypeople.

Jain Agamas and Prakrit Literature: Jain scriptures, especially the Agamas, are composed in Ardhamagadhi Prakrit, which aids in making them understandable to the general populace. These writings focus on principles of non-violence, ethical conduct, and spiritual practice, utilizing the Prakrit language to connect the Sanskrit-educated elite with everyday individuals.

1.6 Tamil Sangam Literature

Ethical and Poetic Works: Originating around 300 BCE to 300 CE, Sangam literature represents one of the earliest collections of secular writings in India and is crafted in classical Tamil. It encompasses works such as *Tirukkural^{III}* by Thiruvalluvar, known for its moral insights and practical wisdom, illustrating the idea of laukika-prayojana (practical purpose) within IKS.

Aham and Puram Poetry: The Sangam literature is categorized into Aham (inner/romantic) and Puram (outer/war) poetry, each embodying different facets of human experience and ethical principles. It illustrates a profound relationship between language and regional identity, remaining a crucial component of Tamil education.

1.7 Bhakti and Sufi Oral Traditions

Bhakti Poetry in Vernacular Languages: The Bhakti movement (approximately 8th to 17th centuries) inspired the creation of devotional poetry in languages such as Hindi, Marathi, Bengali, and Kannada. Figures like Kabir, Mirabai, Tulsidas, and Tukaram composed in the vernacular, making spiritual concepts accessible to the general populace and contesting caste structures, thus enriching an oral and literary heritage.

Sufi Poetry and Devotional Music: Sufi poets like Amir Khusro in Hindavi (early Hindi-Urdu) and Bulleh Shah in Punjabi created relatable mystical poetry that resonated with the general public, focusing on themes of unity and divine love. Their works continue to be recited and sung, highlighting the essential role of oral traditions in the education of Indian languages.

1.8 Medical and Scientific Texts

Ayurvedic Texts (Charaka Samhita and Sushruta Samhita): These essential medical manuscripts, composed in Sanskrit, focus on diagnostics, herbal therapies, and surgical methods. They illustrate the systematic documentation of scientific knowledge in Indian languages, fostering practical applications in the field of healthcare.

Arthashastra and Mathematical Texts: Kautilya's *Arthashastra*, written in Sanskrit, serves

as an ancient guide on governance, economic strategies, and military tactics. Likewise, the works of mathematicians such as Aryabhata and Bhaskara showcase progress in mathematics and astronomy, highlighting language as a vehicle for scientific exploration and technical education.

1.9 Oral Traditions and Folk Literature

Epic Narratives and Folk Tales: Oral storytelling practices have played a crucial role in safeguarding languages and indigenous knowledge systems. Folktales, epics like the *Ramayana* and *Mahabharata*, along with regional legends, are transmitted through generations in local dialects and languages, preserving cultural values and historical stories.

Proverbs and Riddles: Proverbs, riddles, and idiomatic expressions are vital components of Indian languages, offering everyday wisdom and moral instruction. These oral forms serve as concise yet powerful means of laukika-prayojana, encapsulating practical knowledge in a memorable manner.

2.1 Contemporary and Modern Language Projects

Tri-Language Policy in Education*: After gaining independence, India's Tri-Language Policy fosters linguistic diversity by incorporating Hindi, English, and a regional language into the curriculum, thereby enhancing both linguistic and cultural understanding.



The pie chart representing significant texts, scriptures, and oral traditions in Indian linguistic learning

Conservation Initiatives for Endangered Languages^{VI}: Efforts to catalog and teach endangered languages, particularly those spoken by tribal groups, underscore current initiatives aimed at safeguarding linguistic heritage. These languages possess invaluable insights into ecology, herbal medicine, and sustainable living, which resonate with the principles of Indigenous Knowledge Systems (IKS) regarding practical application and tradition.

Languages of India are preserved and transmitted through a variety of texts, scriptures, and oral traditions. From the Vedas and Upanishads to the verses of the Bhakti movement and Tamil Sangam literature, these sources encapsulate the fundamental tenets of Indian Knowledge Systems (IKS). Each linguistic form and literary tradition represents values, perspectives, and practical wisdom, making them crucial for comprehending and engaging with the rich diversity of the Indian Knowledge System. This extensive and continuously evolving legacy offers both enduring insights and practical resources, linking the past with the present through language.

Indian Knowledge Systems (IKS) adopt an interdisciplinary framework where language, philosophy, science, medicine, arts, ethics, and other fields are intimately connected, forming a comprehensive body of knowledge. Indian languages function as both the medium and the means through which these various disciplines interact and shape each other. Below, I detail how language relates to some of the 61 recognized IKS topics to promote a thorough, interdisciplinary understanding

2.2 Philosophy (Darshanas)

Language and Articulation of Philosophical Ideas: The six main schools of Indian philosophy—Nyaya, Vaisheshika, Samkhya, Yoga, Mimamsa, and Vedanta—depend significantly on Sanskrit and Prakrit for accurately expressing intricate philosophical concepts. Texts such as the *Upanishads* and *Yoga Sutras* demonstrate how language conveys and maintains abstract ideas like *Moksha* (liberation), *Dharma* (righteousness), and *Atman* (self).

Structures of Logic and Grammar: The thorough examination of *Vyakarana* (grammar) and

Tarka (logic) within philosophical discussions highlights the influence of language on forming logical reasoning and epistemological frameworks, as evidenced by works like *Nyaya Sutras* by Gautama, which explore reasoning and linguistic application.

2.3 Medicine (Ayurveda)

Sanskrit Medical Literature: Works such as *Charaka Samhita* and *Sushruta Samhita*, composed in Sanskrit, encompasses a wealth of medical knowledge ranging from diagnosis to treatment. The terminology used in Ayurveda, alongside anatomical descriptions and medicinal herbs, is expressed in exact Sanskrit terms, providing the linguistic accuracy required for healthcare professionals.

Oral Preservation of Regional Medicinal Knowledge: Local languages and dialects often retain specific medicinal practices unique to regions, especially within tribal groups, which aligns with the IKS principle of *Laukika-prayojana* (practical utility) in traditional medical fields.

2.4 Astronomy and Mathematics

Linguistic Accuracy in Scientific Expressions: Sanskrit's clarity and conciseness allow mathematicians like Aryabhata and Brahmagupta to capture complex mathematical equations and astronomical findings effectively. This linguistic format facilitates the creation of precise formulas and shlokas that can be easily memorized and passed down.

Oral Learning and Retention: Methods for acquiring mathematical knowledge were enhanced through oral memorization. Verses and mnemonic techniques in Sanskrit supported students and scholars in retaining information, which was critical before the widespread adoption of written documentation.

2.5 Agriculture and Ecology

Vernacular Languages and Ethnobotany: Languages such as Tamil, Kannada, and various tribal dialects possess a rich vocabulary regarding plant species, farming methods, and seasonal variations, maintained through oral traditions in agricultural communities. These terms are essential for safeguarding indigenous ecological knowledge and sustainable agricultural practices.

Environmental Ethics in Sanskrit Literature: Texts in Sanskrit, including the *Rigveda* and the *Aranyakas* (treatises on forests), convey a deep respect for nature, articulating ecological principles and sustainability that are deeply rooted in cultural language.

Arts and Aesthetics (Natyashastra, Dance, and Music) Aesthetic Theory and Language in Natyashastra**: Bharata's *Natyashastra*, which is the cornerstone text for Indian performing arts, uses Sanskrit to outline concepts such as *Rasa* (emotions), *Bhava* (expressions), and *Abhinaya* (acting methods), showcasing the relationship between language, emotion, and artistic expression.

The Role of Language in Music and Poetry: Indian classical music depends on language for *sargam* (musical notes) and song lyrics, while dance forms like Bharatanatyam utilize both Sanskrit verses and local languages to narrate stories. The *sahitya* (lyrics) play a crucial role in expressing spiritual and emotional depth, illustrating language's significance in the arts.

2.6 Metallurgy and Engineering

Terminology in Sanskrit and Prakrit for Technical Subjects: Ancient Indian writings focused on metallurgy and engineering, such as the *RasaratnaSamuccaya* (texts on alchemy) and the *Shilpa Shastra* (architecture texts), were composed in Sanskrit and Prakrit, supplying technical terms for different metals, methods, and measurements.

Traditional Knowledge Transmission in Crafting Communities: The expertise in metalworking and engineering was frequently transmitted orally within guilds, with terminology and practices maintained in regional languages, thereby ensuring the intergenerational preservation of traditional skills.

2.7 Yoga and Physical Culture

Sanskrit as the Language of Yogic Practice: Classical yoga texts, including Patanjali's *Yoga Sutras*, utilize Sanskrit to articulate and clarify yogic postures, breath control, and mental focus. Terms like *Asana*, *Pranayama*, and *Samadhi* carry deep significance and link physical practice to spiritual ideology.

Regional Languages in Folk Yoga Practices: Folk yoga traditions incorporate local languages, merging regional customs and therapeutic methods, highlighting how various linguistic communities adapted yoga principles into everyday life, combining physical and spiritual wellness.

2.8 Law and Governance (Arthashastra)

Legal and Administrative Language in Sanskrit**: Kautilya's *Arthashastra* serves as an essential Sanskrit text that outlines principles for governance, economy, law, and military tactics. It demonstrates the role of language in codifying statecraft and legal systems, influencing governance structures.

Regional Documentation and Records: Historical records of administration, such as land deeds and official proclamations, were commonly created in local languages, showcasing the practical use of legal language at the regional level.

2.9 Education and Pedagogy

Three-Language Formula and Educational Policy: Contemporary educational policies in India, shaped by IKS, advocate for the three-language formula—regional language, Hindi, and English—to promote linguistic variety. This strategy encourages interdisciplinary learning by enabling students to engage with diverse linguistic and cultural viewpoints.

Oral and Experiential Learning Traditions: Traditional Indian education, often delivered in Sanskrit and Prakrit, emphasizes memorization and hands-on learning. The practice of oral recitation, especially of texts like the Vedas, enhances cognitive retention and preserves cultural heritage.

3.1. Ethics and Moral Philosophy

Ethical Literature and Linguistic Expression: Works such as the *Tirukkural* in Tamil, the *Manusmriti* in Sanskrit, and the writings of various saints in regional languages present moral guidance that is accessible to a wide audience. These texts serve as a compass for individual and communal behavior, illustrating the moral foundation of Indian society through its languages.

Bhakti and Sufi Poetry as Moral Reflection: Poets from the Bhakti movement, like Kabir, and Sufi poets such as Bulleh Shah utilized vernacular languages to connect with the common people, focusing on values like compassion, tolerance, and devotion. Their poetry fostered a moral philosophy that was reachable through everyday vernacular.

3.2 Commerce and Economics

Ancient Indian Literature on Commerce and Trade: Works like the *Arthashastra* in Sanskrit provide an organized account of trade and economic activities. Specific vocabulary related to commerce, wealth, and market behavior reveals early insights into economic concepts and practices.

Trade Networks in Multiple Languages: Various regional languages and dialects played a crucial role in enabling trade both within India and with other nations, as traders used an array of languages for negotiation, record-keeping, and communication.

3.3 Astronomy (Jyotisha) and Time Measurement

Linguistic Framework of Astronomical Calculations: Works such as the *Surya Siddhanta* employ Sanskrit to articulate intricate astronomical concepts. Terms related to celestial bodies, planetary movements, and time cycles demonstrate how language underpins the accuracy required for scientific inquiries.

Traditional Oral Practices in Astrology: Besides Sanskrit, many astrologers utilize local languages to engage with their communities, allowing astrological wisdom to be accessible to individuals from various backgrounds.

Indian languages intertwine various fields within the Indian Knowledge System, promoting interdisciplinary education that blends spiritual, ethical, scientific, and practical insights. Through these interconnections, Indian languages safeguard the richness of IKS, ensuring that its diverse perspectives remain accessible and meaningful across generations. This comprehensive approach to education encourages learners to perceive each discipline as part of a greater body of knowledge, rooted in linguistic heritage and cultural insight.

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- I. *The Rigveda*: Traditionally dated to around 1500 BCE, the Rigveda is considered among the earliest written records of human thought. Its oral transmission was ensured by strict phonetic and mnemonic techniques.
- II. *The Upanishads*: Known as the Vedanta or the culmination of the Vedas, the Upanishads profoundly influenced Indian philosophy and global spiritual thought, with core principles like *Brahman* (ultimate reality) and *Atman* (soul).
- III. *Pali Canon*: The decision to preserve Buddhist teachings in Pali reflected a deliberate effort by the Buddha to reach broader audiences, avoiding the exclusivity of Sanskrit.
- IV. *Panini's Ashtadhyayi*: This 4th-century BCE text remains the foundation of Sanskrit grammar, employing a system of rules and meta-rules akin to modern computational algorithms.
- V. *Tirukkural*: Comprising 1,330 couplets, the *Tirukkural* by Thiruvalluvar is a seminal Tamil work exploring ethics, politics, and love, often referred to as the "Universal Bible."
- VI. *Tribal Dialects and Knowledge*: Efforts like the People's Linguistic Survey of India document endangered languages, highlighting their ecological and cultural insights.

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