

Lokvidya: Sustaining India's Traditional Technical Wisdom

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Abstract: Lokvidya, the traditional technical knowledge inherent in India's rich cultural heritage, represents an invaluable repository of ancient wisdom and practices. Historically, it has been an integral part of daily life in various Indian communities, offering sustainable and practical approaches to living that are deeply embedded in local cultures and traditions. However, the rapid advancement and adoption of modern technologies from foreign countries have increasingly marginalized these indigenous knowledge systems, putting them at risk of fading into obscurity. Recognizing the urgent need to preserve this invaluable cultural heritage, concerted efforts are being made in regions across India, including Assam, Jharkhand, Odisha, West Bengal, and the northeastern parts. These initiatives focus on documenting traditional practices, providing education and training, and raising awareness about the significance and applications of Lokvidya. The aim is to ensure that this traditional wisdom is not lost but rather continues to be a vibrant part of India's cultural identity. Moreover, the potential integration of Lokvidya into modern practices, such as psychological counseling, offers an exciting avenue for innovation. By incorporating the holistic, rational, and structured approaches of Lokvidya, new methods and perspectives can be developed to address contemporary challenges, particularly in mental health and well-being. This synthesis of ancient wisdom with modern scientific approaches could pave the way for culturally sensitive and innovative methodologies, enriching contemporary practices with the depth and diversity of India's traditional knowledge.

Keywords: Lokvidya, Technical Wisdom

1. Introduction

India's Intellectual Heritage: A Journey Through Ancient Knowledge and Contemporary Challenges

India's intellectual history, particularly in ancient and pre-medieval times, is marked by a remarkable breadth and depth of knowledge. This encompasses a vast array of thoughts, scientific discoveries, artistic and philosophical perspectives, languages, and lifestyles. Texts like the Vedas, Upanishads, and various other scriptural, scientific, and artistic works, along with folklore, are testaments to this rich intellectual tradition.

Key developments in the six traditional branches of knowledge, the Vedangas, and other disciplines such as arithmetic, algebra, astronomy, medicine, chemistry, biology, astrology, logic, grammar, and yoga, highlight India's deep engagement with the natural world. Knowledge, or vidya, has long been revered in Indian culture as the truest form of wealth, dhanam. This perspective, valuing knowledge over traditional resources like land, labor, and capital, has become increasingly relevant in today's knowledge-driven society.

This wealth of knowledge was traditionally transmitted through generations via gurukulas, or traditional schools. However, these practices faced disruption due to invasions

and the imposition of colonial education systems. Despite these challenges, many Indian communities have managed to preserve and enhance these traditional practices, which remain integral to their way of life.

The advent of the British education system and subsequent educational policies in post-independence India unfortunately led to the neglect and near loss of many indigenous technologies. Globalization further accelerated this decline, threatening the survival of sustainable and eco-friendly traditional technologies and contributing to social issues like unemployment and unrest as communities drifted away from lokvidya.

In response to this crisis, the New Education Policy (NEP) 2020 has proposed the revival of Lokvidya. This policy underscores the importance of utilizing local materials and labor, along with traditional, sustainable technologies, to promote self-reliance (Atmanirbhar Bharat) and generate employment. This revival not only aims to preserve India's cultural heritage but also to offer the world innovative solutions rooted in ancient knowledge systems. The NEP 2020's commitment to documenting and preserving this heritage is a crucial step towards safeguarding these invaluable traditions and insights for future generations.

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Lokvidya: The Traditional Ancient Technical Knowledge of India

Lokvidya, a term derived from Sanskrit meaning 'people's knowledge,' represents the rich and diverse tapestry of traditional ancient technical knowledge that has flourished across India for centuries. This profound wisdom, deeply rooted in the everyday lives of local communities, encompasses a wide array of skills, techniques, and practices passed down through generations. Lokvidya is not just about the technical know-how; it's a holistic understanding of life, integrating cultural, spiritual, and environmental aspects.

- 1) **Agricultural Practices:** One of the most significant aspects of Lokvidya is its agricultural knowledge. Traditional farming methods, deeply in tune with nature, demonstrate a sustainable approach to agriculture. Practices like crop rotation, organic farming, and indigenous irrigation systems not only conserve resources but also ensure biodiversity.
- 2) **Medicinal Knowledge:** Ayurveda and other traditional systems of medicine are prime examples of Lokvidya in healthcare. Utilizing herbs, roots, and minerals, these practices offer holistic healing approaches, often tailored to individual needs and constitutions.
- 3) **Craftsmanship and Artistry:** Lokvidya includes a rich variety of crafts and art forms, from the intricate textile weaving techniques of the North-East to the pottery and metalwork of southern India. These crafts are not just products of artistic expression but also embody the cultural narratives and traditions of their regions.
- 4) **Architectural Wisdom:** The ancient architectural techniques found across India, whether in the construction of temples or homes, reflect a deep understanding of materials, climate, and geography. This knowledge is not just functional but also aesthetically profound, often aligning with spiritual and cosmic principles.
- 5) **Environmental Conservation:** Lokvidya also encompasses traditional practices of environmental conservation. Indigenous communities have long practiced methods of water conservation, forest management, and soil preservation, demonstrating an inherent respect and understanding of the natural world.
- 6) **Maritime and Navigational Skills:** Coastal communities in India have a rich tradition of maritime skills, including shipbuilding and navigation. These skills, developed over centuries, facilitated trade and cultural exchanges across seas and oceans.
- 7) **Metalwork and Toolmaking:** Ancient India's proficiency in metallurgy, including iron smelting and tool making, as seen in the historical accounts of places like the Asur tribe in Jharkhand, is a testament to its advanced technical knowledge.
- 8) **Culinary Techniques:** Indian cuisine, with its diverse range of flavors and techniques, is also a form of Lokvidya. Traditional methods of food preservation, fermentation, and cooking are deeply rooted in local cultures and climatic conditions.

In recent years, there has been a growing awareness of the importance of preserving and revitalizing Lokvidya. This traditional knowledge, with its sustainable and eco-friendly practices, offers valuable lessons for addressing contemporary challenges, especially in the context of environmental conservation and sustainable living. Efforts are being made to document, protect, and promote Lokvidya not only as a cultural treasure but also as a practical resource for modern innovation and development.

2. Why Reviving Bharatiya Lokvidya is Crucial

Reviving Bharatiya Lokvidya, the traditional and indigenous knowledge of India, is crucial for several compelling reasons that extend beyond the preservation of cultural heritage. This revival is vital in contemporary society for sustainable development, ecological balance, and fostering innovation.

- 1) **Preserving Cultural Heritage:** Lokvidya represents the rich diversity and depth of Indian culture and traditions. Reviving these practices helps preserve India's unique cultural identity, ensuring that the wisdom of ancestors is not lost to future generations.
- 2) **Sustainable Living Practices:** At a time when the world grapples with environmental crises and unsustainable development models, Bharatiya Lokvidya offers eco-friendly, sustainable solutions. Traditional practices in agriculture, water conservation, and natural resource management are inherently sustainable and can guide current efforts towards environmental conservation.
- 3) **Holistic Healthcare:** Indigenous health practices like Ayurveda and Yoga, integral to Lokvidya, provide holistic approaches to health and wellness. These practices emphasize prevention and treat the individual as a whole, offering valuable alternatives to modern medicine's often compartmentalized treatment methods.
- 4) **Community Empowerment:** Reviving Lokvidya can empower local communities, especially in rural areas. By valuing and promoting traditional crafts, agriculture, and other skills, communities can generate sustainable livelihoods and reduce dependence on external, often unsustainable, economic models.
- 5) **Educational Value:** Incorporating Lokvidya into the educational curriculum can provide a more comprehensive and grounded learning experience. It ensures that the knowledge of local flora, fauna, climate patterns, and traditional practices is passed on to the youth, keeping this wisdom alive and relevant.
- 6) **Biodiversity Conservation:** Traditional knowledge systems have a deep understanding of local ecosystems. This knowledge is crucial for biodiversity conservation, as communities relying on Lokvidya often maintain a harmonious balance with their natural surroundings.
- 7) **Global Relevance:** In an increasingly globalized world, Lokvidya offers unique perspectives and practices that can contribute to global discussions on sustainable development, health, and ecological balance.
- 8) **Innovation and Development:** Reviving traditional knowledge systems can spark innovation. When

combined with modern technology and research, Lokvidya can lead to new discoveries and developments, especially in areas like sustainable agriculture, natural resource management, and healthcare.

- 9) Resilience in the Face of Change: Local knowledge systems are often more resilient in the face of environmental changes and disasters. By reviving and relying on Lokvidya, communities can better adapt to climate change and other ecological challenges.

In summary, reviving Bharatiya Lokvidya is not just about preserving the past; it's about building a sustainable, healthy, and resilient future. It recognizes that traditional wisdom, when integrated with modern science and technology, can address many of the contemporary world's challenges.

Indian Ancient Wisdom in Rainfall Prediction: A Comparative Study with Modern Meteorology

Recent research conducted at the Rashtriya Sanskrit Vidyapeeth in Tirupati has brought to light the significant contributions of India in the field of science, particularly in sustainable and eco-friendly technologies. A noteworthy study spanning five years focused on evaluating the effectiveness of traditional Indian methods in predicting rainfall. This study involved a comparative analysis between the ancient Indian panchang system and contemporary meteorological models used for rainfall forecasting.

The results of this study were quite remarkable. Predictions made using the panchang system, which takes into account a broad spectrum of parameters, showed an accuracy rate of 60-80%. This figure is significantly higher than the 40-70% success rate achieved by modern meteorological models. The comprehensive approach of the panchang system, which considers various factors that may be overlooked by contemporary methods, is believed to contribute to its superior accuracy.

The study further validated the reliability of these traditional methods by demonstrating that the correlation between Vedic rainfall predictions and actual rainfall stood at approximately 75% on average. This correlation was consistently observed in real-time data from 2012 to 2015. The data, based on the Indian Almanac, was meticulously prepared by the researchers, who have been validating their predictions annually.

These findings reinforce the relevance and depth of India's ancient scientific knowledge, suggesting that the integration of traditional wisdom with modern scientific methods could bridge gaps in our current understanding, especially in fields like meteorology where precision is paramount. The study highlights the crucial role of preserving and studying traditional knowledge systems, which can provide insightful and practical solutions to modern-day challenges.

Unveiling the Mathematical Marvels of the Bakshali Manuscript and the Origin of Zero

The Bakshali Manuscript, an ancient Indian text dating around 200 CE, has recently gained international attention through a joint research project by teams from the United States and the United Kingdom. Their studies revealed that the manuscript contains advanced algorithms for calculating square roots, remarkably up to four times faster than similar methods known until now. This finding not only showcases the mathematical sophistication of ancient India but also emphasizes the manuscript's vital role in the history of global mathematics.

One of the most revolutionary achievements in ancient Indian mathematics is the conceptualization of zero. Considered one of the most significant breakthroughs in mathematical history, the inception of zero as an independent number, beyond a mere placeholder, is deeply intertwined with India's philosophical and intellectual traditions, particularly the concept of the void.

This innovative idea of zero as a standalone number first appeared in the works of the Indian astronomer Brahmagupta. His treatise, "Brahmasphutasiddhanta," composed in 628 CE, is recognized as the earliest document to acknowledge zero as a number in its own right, complete with a discussion on zero-based arithmetic, paving the way for its later applications in mathematics.

The Bakshali Manuscript is a testament to the rich and complex mathematical traditions of India and the broader Eastern world, spanning several centuries. Its significant contributions, particularly in numerical algorithms and the development of zero, illustrate how mathematics transcends cultural, historical, and political boundaries. The introduction of zero, a concept pioneered by these early Indian mathematicians, has become a fundamental aspect of the digital era and a critical component in contemporary mathematics and technology. This historical insight highlights the profound and lasting global influence of India's mathematical innovations, particularly during the period between 200-400 CE, which continues to shape our current understanding and use of mathematics.

Ancient India's Mathematical Heritage: Bridging Engineering, Aesthetics, and Psychology

Ancient India's mathematical tradition, remarkably evident in its architectural marvels, transcends the conventional boundaries of engineering and aesthetics, extending its influence into diverse fields, including psychological counseling. This tradition, a harmonious fusion of mathematical precision and aesthetic grace, was cultivated without the reliance on modern sophisticated tools. It stands as a testament to an intricate understanding of science and art, interwoven seamlessly in historical practices.

This profound mathematical understanding, manifesting in the

structural and artistic grandeur of ancient Indian architecture, offers more than just visual delight; it embodies principles and insights that are relevant to contemporary disciplines. The precision and harmony evident in these structures reflect a deep cognizance of balance, proportion, and symmetry—concepts that resonate with the principles of psychological counseling, where balance and harmony are often sought in mental and emotional states.

The legacy of ancient India's mathematics, therefore, is not confined to its historical achievements in science and engineering. It continues to inspire and inform modern practices, suggesting that the wisdom of the past can provide valuable insights for present-day challenges, including those in the realm of psychology. This multidisciplinary impact underscores the importance of looking beyond the surface of historical knowledge to uncover its potential applications in various modern contexts.

Shaastra: The Indian Tradition of Rational and Systematic Inquiry in Science

In the rich tapestry of Indian tradition, "shastra" represents the conceptual equivalent of what is known in the contemporary world as science. Characterized by a rigorous and methodical framework, shastras are grounded in "Yukti," a principle denoting rationality and logical reasoning. These ancient texts and teachings are dedicated to modeling and understanding the complexities of real-world phenomena, much like modern scientific disciplines.

This systematic and structured approach inherent in shastras mirrors the precision and methodical inquiry required in modern fields such as psychology. In psychology, structured inquiry and rational discourse are vital for understanding the human mind and behaviour, similar to how shastras dissect and interpret various aspects of the natural and philosophical world.

The principles of shastra, with their emphasis on rationality and systematic investigation, offer a timeless model for intellectual exploration and problem-solving. This highlights the enduring relevance of traditional knowledge systems, providing a framework that can complement and enrich modern scientific methods, particularly in disciplines that rely heavily on structured analysis and logical rigor.

Structured Inquiry in Ancient Indian Knowledge Systems: Relevance in Psychological Counseling

Ancient Indian scriptures and knowledge systems, encompassing diverse fields such as the science of language (vyaakarana), the art of discourse (mimaamsa), and the logic of inference (nyaaya), share a unified methodology rooted in structured inquiry. This methodological coherence is integral to a holistic and clear understanding of complex issues, making it highly valuable in fields like psychological counseling.

Structured inquiry, as practiced in these ancient disciplines, involves a meticulous and systematic approach to problem-solving and understanding. This approach is particularly pertinent in psychological counseling, where unraveling complex human emotions and thoughts requires a methodical and coherent strategy. The application of structured inquiry enables counselors to dissect problems methodically, ensuring a comprehensive understanding and effective resolution.

Furthermore, the role of Sanskrit in these traditional knowledge systems underscores its significance. Known for its systematic structure and linguistic precision, Sanskrit has been the preferred medium for scientific and philosophical discourse in India. Its capability to articulate complex concepts succinctly and clearly makes it an ideal language for precise communication, a critical element in psychological counseling. The clarity and precision in communication afforded by Sanskrit can be instrumental in counseling, aiding in the effective conveyance of ideas and the interpretation of clients' thoughts and emotions. This highlights the potential benefits of incorporating principles from these ancient knowledge systems, including their methodological and linguistic approaches, into modern psychological practices.

Preserving Lokvidya: Safeguarding India's Traditional Technical Knowledge

India's cultural heritage includes a wealth of "lokvidya," a term referring to the traditional technical knowledge that has been a cornerstone of daily life for common people across various regions. This indigenous knowledge, encompassing a wide array of practices, skills, and wisdom, has been passed down through generations, forming an integral part of India's rich cultural tapestry.

However, the advent of modern technologies from abroad poses a significant threat to these traditional knowledge systems. The influx of new, foreign technologies has led to a gradual decline in the practice and transmission of lokvidya, placing it at risk of fading into oblivion. This situation has sparked concern among those who recognize the value and importance of these indigenous practices, not only as a cultural heritage but also as a sustainable and practical approach to living.

Efforts are now underway to preserve and revive these traditional knowledge systems, particularly in regions like Assam, Jharkhand, Odisha, West Bengal, and the northeastern parts of India, where they have historically been most prevalent. These initiatives involve documenting these practices, providing training and education, and raising awareness about the importance of lokvidya. By preserving these systems, we not only honor our cultural heritage but also ensure that the valuable wisdom and practices embedded in lokvidya continue to benefit future generations and contribute to sustainable living practices. This effort is crucial in maintaining a balance between embracing modern advancements and preserving the invaluable traditional knowledge that forms the foundation of India's diverse

cultural identity.

Blending Ancient Wisdom with Modern Practices: A Foundation for Future

The integration of ancient Indian knowledge systems into contemporary practices, such as psychological counseling, holds the promise of bringing unique insights and novel methodologies to the field. The ancient sciences of India, characterized by their holistic, rational, and structured approaches, can offer fresh perspectives and tools that are particularly relevant in addressing mental health and well-being in modern society.

This fusion of traditional wisdom with modern scientific techniques has the potential to revolutionize the approach to psychological counseling. By drawing on the comprehensive and methodical frameworks of ancient Indian sciences, counselors and therapists can develop more culturally sensitive, well-rounded treatment methods.

These methods would not only be effective in addressing various psychological issues but also resonate more deeply with individuals from diverse cultural backgrounds.

Such an integrative approach acknowledges the value of traditional knowledge in understanding the human psyche and fosters an environment where ancient practices are not merely preserved as cultural artifacts but are actively applied to contemporary challenges. This blending of old and new can lead to the development of innovative counseling techniques that are both effective and respectful of cultural heritage, ultimately enriching the field of psychology with a diverse range of therapeutic tools and perspectives.

Reviving Asur Tribe's Iron Smelting: A Path to Global Recognition and Socio-Economic Empowerment

The Asur tribe of Jharkhand, known for their ancient and continuous practice of traditional iron smelting, recently showcased their skills at the 31st Surajkund International Craft Mela in Haryana. This tribe, one of the earliest iron smelters in the world, is now facing the threat of extinction. The Asurs are not just traditional iron smelters but are also skilled metal workers, a fact corroborated by ancient metal relics found at various Asur sites.

Archaeological evidence suggests that Jharkhand has a long-standing history in metallurgy, particularly in the smelting of copper, gold, and iron. The Asur tribe, believed to be a nomadic group, is credited with introducing iron smelting to the region. This rich heritage of metallurgy is a testament to their skills and knowledge in metalwork.

The revival of the Asur tribe's traditional iron smelting techniques could pave the way for global recognition. This could be a significant step not only in preserving a vital part of their cultural heritage but also in opening up new avenues for economic development. The unique iron products made by

the Asurs, known for their anti-rust properties, have the potential to gain a substantial market in the international arena.

Such global recognition and marketing of their iron products could provide a strong boost to the socio-economic status of the Asur tribe. By bringing their ancient craft to the forefront of the global market, there's an opportunity to both preserve a fading art and improve the livelihood of the Asur community. This initiative could serve as a model for how traditional knowledge and skills can be leveraged for economic empowerment and cultural preservation.

Preserving Assam's Manuscript Painting: A Rich Legacy of Cultural Heritage

Manuscript painting, a significant part of Assam's cultural heritage, flourished during the medieval period, largely due to the influence of the satras, institutional centers of the bhakti movement. This religious and cultural movement played a pivotal role in nurturing the art of manuscript painting in the region. These paintings, rich in detail and color, often depicted stories and chapters from revered Hindu epics such as the Ramayana, Mahabharata, and predominantly the Bhagavata Purana, focusing particularly on narratives related to Lord Krishna.

The materials used for these manuscripts in Assam were distinctive and involved intricate preparation processes. Sanchipat, a thicker variety, was crafted from the bark of the Saci tree or aloe wood (*Aquilaria agallocha*). The preparation of this material was labor-intensive, involving curing, seasoning, and polishing to ensure that the leaves could retain ink effectively. Another type of surface used was Tulapat, a handmade paper made from pressed cotton.

Despite the flourishing of this art form during the medieval period, its prevalence declined during British rule and the subsequent post-independence era. However, the tradition did not vanish entirely, thanks to a few dedicated artists who continued to practice and keep the art form alive. Today, a handful of artists are still engaged in manuscript painting, striving to practice, preserve, and propagate this rich art form. Their efforts are crucial in maintaining this unique aspect of Assam's and India's cultural heritage, ensuring that the legacy of manuscript painting continues to be appreciated and recognized by broader society.

Koraput's Traditional Agriculture System: Recognized as a Globally Important Agricultural Heritage System by FAO

The Food and Agriculture Organization (FAO) of the United Nations has bestowed the prestigious designation of Globally Important Agricultural Heritage System (GIAHS) on the traditional agricultural practices of the Koraput region in Odisha, India. This recognition marks the first instance of an Indian agricultural system receiving such an honor, highlighting its remarkable contribution to enhancing food

security, biodiversity, indigenous knowledge, and cultural diversity, all of which are vital for sustainable and equitable development.

The accolade for the Traditional Agriculture Koraput System is a result of a concerted effort by the MS Swaminathan Research Foundation (MSSRF) based in Chennai, which submitted a proposal advocating for the conservation of these age-old farming practices. This global recognition by the FAO not only puts a spotlight on the unique agricultural methods of Koraput but also underscores the significance of traditional knowledge and practices in modern sustainable development. This honor serves as a testament to the region's commitment to maintaining biodiversity and cultural heritage through its distinctive agricultural practices.

Odisha's Weaving Heritage: The Renowned Art of Ikat and Sambalpuri Textiles

Odisha, a state in India, is celebrated for its rich weaving traditions, with districts like Balasore, Mayurbhanj, Sambalpur, Cuttack, Jaipur, Khorda, and others being renowned for their textile craftsmanship. Notably, Gopalpur village in the Jaipur district is famous for producing exquisite Tassar fabrics. Among the various weaving styles in Odisha, the 'ikat' or 'bandha' technique stands out for its popularity and uniqueness.

The 'ikat' technique involves a distinctive process where, in the 'single ikat' method, either the warp or the weft thread is dyed. In contrast, the 'double ikat' technique involves dyeing both the warp and weft before weaving. This intricate process results in the creation of textiles with complex patterns and vibrant colors.

Sambalpuri textiles, originating from Western Odisha, have secured a prestigious place both in India and internationally, known for their distinct quality and design. These textiles have become an integral part of Odisha's cultural heritage. Traditionally, the handloom sector, especially the production of Sambalpuri sarees with Ikat weaving, is predominantly the occupation of the Meher community (Bhulia, Kuli, and Kusta) in Western Odisha.

Despite the international acclaim and recognition of Sambalpuri textiles, the textile industries in Western Odisha face challenges in sustaining themselves. The weavers, often belonging to vulnerable and weaker sections of society, continue to strive to keep this traditional art form alive. The Sambalpuri saree, in particular, stands out as a symbol of this rich weaving tradition, famous not only in Odisha but also across India and overseas. The ongoing efforts to sustain and promote this heritage are crucial for preserving the unique identity and craftsmanship of Odisha's weaving community.

Uncovering the Legacy of Pre-Modern Iron Technology in Nagaland's Wui Village

Researchers have recently uncovered evidence of ancient

iron-smelting technology in Wui village, located in the Tuensang district of Nagaland, India. This village, renowned for its traditional iron-smelting and tool production skills, has been practicing these crafts since pre-colonial times. However, the art of iron production in Wui had faded into obscurity, living on only in the oral traditions of the local community.

In a collaborative effort, scientists from Nagaland University and the Indian Institute of Technology, Guwahati, undertook a comprehensive investigation to understand the evolution of smelting practices in Wui village. Their research employed advanced techniques such as microstructure analysis, optical microscopy, Field Emission Scanning Electron Microscopy (FESEM), hardness testing, and X-Ray Diffraction (XRD). These methods provided an in-depth understanding of the various mineral compositions present and helped identify the specific types of mineral ores that were historically used in the smelting process.

Additionally, the research team conducted electrical furnace tests using carefully selected iron ore samples from the Malai Dai site. These tests further substantiated the findings and offered a clearer picture of the traditional smelting techniques used in Wui village. This research not only sheds light on the lost art of iron smelting in this region but also contributes significantly to our understanding of pre-modern metallurgical practices in Nagaland. It underscores the importance of preserving and studying traditional knowledge systems, which hold valuable insights into historical and cultural practices.

Documenting Ethnomedicinal Practices: The Debbarma Tribe's Use of Medicinal Plants in West Tripura

In the West Tripura district of Tripura, India, the Debbarma tribe utilizes a rich variety of 36 ethnomedicinal plant species in their traditional herbal medicine practices. This diverse assortment includes 10 woody plants, 8 shrubs, and 18 herbs, each serving specific therapeutic purposes in various herbal formulations. The depth and breadth of this traditional knowledge, passed down through generations, reflect a profound understanding of the natural medicinal properties of these plants.

However, there is a growing need for scientific documentation of these traditional herbal medicine formulations. Proper documentation not only preserves this valuable knowledge for future generations but also allows for a better understanding and potential integration of these practices into modern medicine. Scientific validation and study of these formulations can lead to new discoveries in healthcare and provide insights into the efficacy and safety of these traditional remedies. The Debbarma tribe's use of medicinal plants is a significant part of their cultural heritage and offers a rich resource for ethnobotanical studies, highlighting the importance of conserving and studying indigenous knowledge systems.

Fostering Innovation through Systematic Study of India's Traditional Knowledge

To harness the full potential of India's indigenous technologies, it is crucial to conduct systematic scientific investigations, analytical studies, and comprehensive documentation. This approach not only preserves traditional knowledge but also opens the door to innovative applications, enhancing the utility and relevance of these age-old techniques in modern contexts.

Central to this endeavor is the education of India's younger generation in traditional technical knowledge. By familiarizing them with these rich traditions, we can tap into their collective intellectual prowess, fueling further research and innovation. This process is not just about preserving the past; it's about building a bridge to the future, where traditional knowledge informs and inspires new scientific discoveries and technological advancements.

The revival of Bharatiya LokVidya (Indian Traditional Knowledge) plays a pivotal role in this process. Proper documentation and training are key components, ensuring that both educators and the youth have a deep understanding of these practices. By equipping teachers with the necessary knowledge and skills to pass on this heritage, and by inspiring young minds to explore and expand upon this knowledge, we can create a robust ecosystem of learning and innovation.

This holistic approach promises a future where traditional Indian knowledge systems are not only preserved but is also actively contributing to the global pool of scientific and technological advancements. It's about creating a synergy between the old and the new, where the wisdom of the past helps shape a more innovative and sustainable future.

3. Conclusion: The Imperative of Reviving Bharatiya Lokvidya

In conclusion, the revival of Bharatiya Lokvidya is not merely a nostalgic journey into the past, but a critical step towards a sustainable and resilient future. It represents a confluence of cultural preservation, sustainable development, and holistic well-being. By reinvigorating these traditional knowledge systems, we honor our rich cultural heritage and tap into a reservoir of wisdom that holds answers to many contemporary challenges.

This revival fosters a deeper connection with our roots, promotes sustainable living practices, and empowers local communities, thus contributing to a more balanced and equitable world. It also encourages holistic health practices, supports biodiversity, and drives innovation by blending ancient wisdom with modern science. Moreover, it equips communities to be more adaptive and resilient in the face of environmental changes and global challenges.

Ultimately, reviving Bharatiya Lokvidya is about recognizing

the intrinsic value of traditional wisdom and its potential to enrich our lives today. It's a journey that not only looks back with reverence but also forward with hope, towards a world where the past and present coexist and complement each other, creating a sustainable, harmonious, and enlightened future.

References

- [1] Vanadeep K, Sada Siva Murty R and Krishnaiah M, "Meteorological predictions preserved in the Panchangam versus real-time observations – a case study over Tirupati region – a semi-arid tropical site in India" Indian Journal of Science and Technology · April 2012/ Vanadeep Kaluvagunta/ Vol. 5 No.4 (Apr 2012) ISSN: 0974- 6846 .
- [2] Malathi Iyer, "Forecasting and Validating Real Time Rainfall Observations with Traditional Vedic Techniques at Govardhan Eco Village", Online Issn 2348-3083, JOURNAL, JUNE-JULY 2018, VOL- 6/28, PP.8
- [3] David Howell, "Carbon dating reveals Bakhshali manuscript is centuries older than scholars believed and is formed of multiple leaves nearly 500 years different in age", Head of Heritage Science at the Bodleian Libraries, University of Oxford, 3 July 2017, pp. 5-6
- [4] Ashis Kumar Sinha, "Asur - an ancient Iron Smelter, can get Global Recognition, The Researchers". International Journal of Research - Volume I, Issue I, November-2015 ISSN: 2455-1503 pp.01
- [5] Bikramjit Sarkar, Dr. Rajesh Bhowmik, "The Art of Traditional Painting in Assam: a Critical Study on the Manuscript Paintings of Bhagavata-Purana", VI-VII, The
- [6] Chitrolekha Journal on Art and Design (E-ISSN 2456-978X), Vol. 1, No. 2, 2017, pp. 01-02 .
- [7] Dr. Minaketan Bag and Dr. Balakrishna Behera, "Problem and Prospects of Handloom Sector in Western Odisha", Research Gate, March 2020, pp. 02-03
- [8] Tiatemjen Tzudir, Tiatoshi Jamir, and Sukanya Sharma , "Analysis of iron ore, iron slag and soils of termite nest from Wui village, Nagaland, India" – ResearchGate – January, 2019, pp.09
- [9] Poulami Saha, Poushali Saha, Chiranjit Debbarma, Gulab Singh Yadav. "Traditional uses of Medicinal Plants by Debbarma Tribes in West District Tripura, India", Indian Journal of Hill Farming, December 2016, Volume 29, Issue 2, Page 172-176.

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