



Where dream Chisels into reality

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INDIAN KNOWLEDGE IN TECHNOLOGY AND INNOVATION: BRIDGING PAST AND FUTURE



NIYATI BIST

India is often seen today as a rising hub of technology, startups, and digital innovation. From software services to space missions, the country is shaping its future through science and technology. However, what is often overlooked is that innovation has always been part of India's civilizational journey. The Indian Knowledge System (IKS) contains deep scientific, technological, and engineering insights that continue to inspire modern innovation. Bridging ancient wisdom with contemporary technology can help India create solutions that are both advanced and sustainable.

Ancient India demonstrated remarkable achievements in mathematics and engineering, many of which form the foundation of modern science. The concept of zero, decimal systems, and advanced algebra developed by Indian scholars revolutionized global mathematics.

These ideas remain essential in today's fields such as computer science, data analytics, and artificial intelligence. Without these fundamental contributions, modern digital technology would not exist in its current form.

India's architectural and engineering knowledge also reflects technological brilliance. Ancient structures like step wells, temples, and urban layouts of the Indus Valley Civilization show advanced understanding of geometry, material science, and environmental design. Step wells were not just architectural marvels but sustainable water management systems adapted to local climate conditions. Today, as cities struggle with water scarcity and climate change, these traditional designs inspire modern architects and engineers to develop eco-friendly infrastructure.

In the field of metallurgy and materials science, ancient India was far ahead of its time. The rust-resistant Iron Pillar of Delhi and the high-quality steel produced in ancient times

demonstrate sophisticated knowledge of metal extraction and treatment. Modern researchers study these techniques to develop stronger, more durable, and sustainable materials. This proves that traditional knowledge, when scientifically examined, can contribute to cutting-edge innovation.

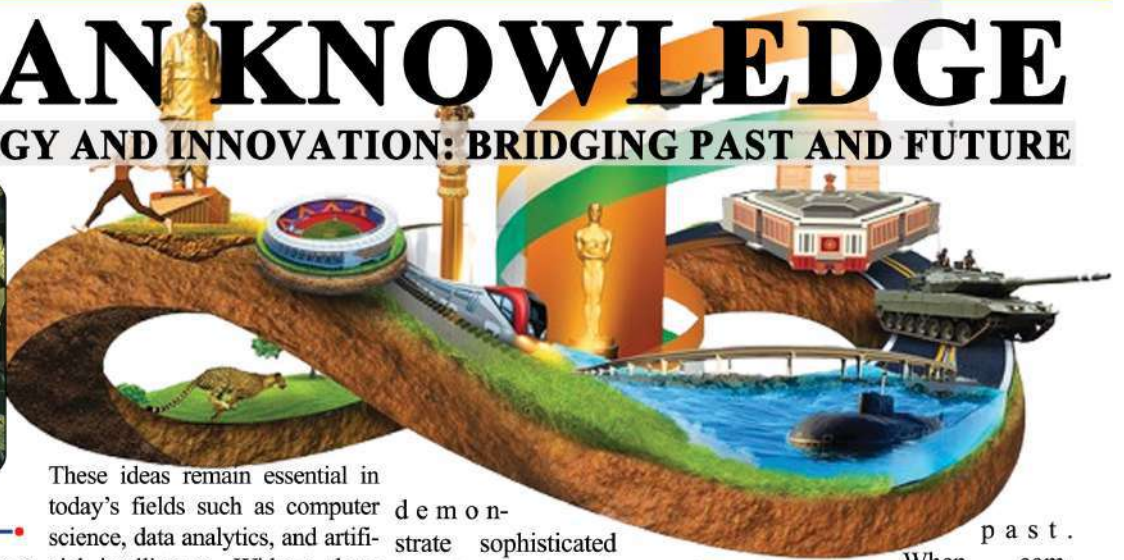
Indian knowledge systems also influenced medicine and life sciences. Ayurveda emphasizes personalized treatment, prevention, and balance—principles now echoed in modern concepts like personalized medicine and holistic healthcare. Biotech researchers are exploring traditional medicinal plants using modern scientific methods to develop new drugs and therapies. This integration of ancient wisdom with modern biotechnology offers promising solutions for global health challenges.

In recent years, startups and researchers have begun rediscovering Indian knowledge to create innovative solutions. From eco-friendly building materials inspired by traditional techniques to sustainable farming methods rooted in ancient practices, innovation today is increasingly drawing from the

past. When combined with modern tools like artificial intelligence, data science, and advanced research methods, traditional knowledge becomes a powerful source of inspiration.

For students, this fusion of past and future offers a unique opportunity. Understanding Indian knowledge systems alongside modern science encourages creative thinking, interdisciplinary learning, and culturally rooted innovation. It reminds young innovators that progress does not always mean abandoning tradition; sometimes, it means reinterpreting it with fresh perspectives.

In conclusion, Indian knowledge in technology and innovation represents a bridge between heritage and progress. By respecting and studying ancient wisdom through a scientific lens, India can develop solutions that are not only technologically advanced but also socially responsible and environmentally sustainable. For the youth, embracing this bridge can lead to innovation that honors the past while confidently shaping the future.



INDIAN ARTS AND ARCHITECTURE: Knowledge Encoded in Creativity



ANSHIKA



India's arts and architecture are often admired for their beauty and grandeur, but beyond aesthetics, they represent a deep reservoir of knowledge. Every sculpture, painting, temple, and monument reflects a sophisticated understanding of science, mathematics, philosophy, and social life. Indian arts and architecture are not merely creative expressions; they are systems of knowledge encoded in creativity, passed down through generations. For students today, rediscovering this legacy offers insight into how imagination and intellect can work together.

Indian architecture demonstrates remarkable scientific and environmental awareness. Ancient temples were not randomly designed; they followed principles of Vastu Shastra, which combined geometry, astronomy, and natural elements. The orientation of temples ensured maximum sunlight and airflow, creating naturally cool and balanced spaces. Structures like the Sun Temple at Konark or the Brihadeeswarar Temple in Thanjavur reveal precise mathematical calculations and advanced engineering skills, achieved without modern tools. These monuments stand as living textbooks of applied science and design.

Urban planning in ancient India further highlights this

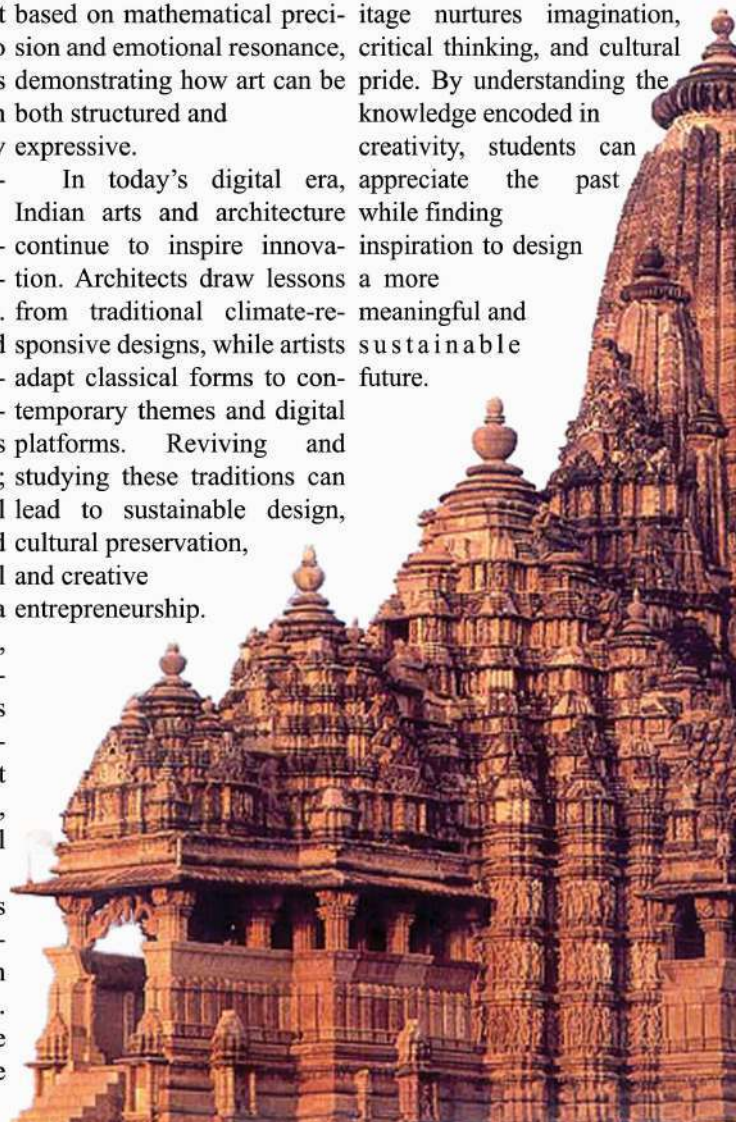
knowledge tradition. The texts that explain body movements, rhythm, facial expressions, and emotional expression, such as Mohenjo-daro and Harappa, featured grid patterns, advanced drainage systems, and standardized bricks. This reflects an understanding of hygiene, public health, and civic planning that modern cities continue to struggle with. Such examples prove that creativity in Indian architecture was deeply rooted in logic and practicality.

Indian visual arts—painting, sculpture, and crafts—also carry encoded knowledge. Classical art forms followed strict rules regarding proportion, expression, and symbolism. Sculptures in temples were not merely decorative; they conveyed philosophical ideas, moral lessons, and social values. In painting styles like Ajanta murals or Madhubani art, colors, motifs, and compositions held symbolic meanings connected to nature, mythology, and human emotions. Art was a medium of education, storytelling, and cultural transmission.

Performing arts such as classical dance and music further illustrate this integration of creativity and knowledge. Dance forms like Bharatanatyam or Kathak are governed by detailed

In conclusion, Indian arts and architecture represent a unique blend of creativity and knowledge. They teach us that art is not separate from science or philosophy, but an expression of them. For today's youth, engaging with this heritage nurtures imagination, critical thinking, and cultural pride. By understanding the knowledge encoded in creativity, students can appreciate the past while finding inspiration to design a more meaningful and sustainable future.

In today's digital era, Indian arts and architecture continue to inspire innovation. Architects draw lessons from traditional climate-responsive designs, while artists adapt classical forms to contemporary themes and digital platforms. Reviving and studying these traditions can lead to sustainable design, cultural preservation, and entrepreneurship.



REVIVING ANCIENT WISDOM:

HOW INDIA'S KNOWLEDGE SYSTEMS CAN INSPIRE TODAY'S YOUTH



AMIT SHARMA

Editor

In an age driven by artificial intelligence, digital learning, and rapid innovation, the idea of looking back to ancient knowledge may seem outdated to many young minds. Yet, India's knowledge systems—developed over thousands of years—offer timeless insights that remain deeply relevant today. The Indian Knowledge System (IKS) is not merely a record of the past; it is a living heritage that can guide today's youth toward balanced thinking, innovation, and responsible citizenship.

India's ancient scholars were not confined to a single discipline. They explored science, mathematics, medicine, philosophy, governance, arts, and environmental sustainability in an integrated manner. From the concept of zero in mathematics to advanced understanding of astronomy, from Ayurveda's holistic approach to health to the philosophical depth of the Upanishads, Indian knowledge systems promoted curiosity, inquiry, and harmony with nature. For students navigating a competitive and stressful world, this integrated approach offers valuable lessons.

One of the most powerful contributions of Indian knowledge is its emphasis on holistic education. Traditional learning systems like the



Gurukul focused not only on intellectual growth but also on character, discipline, and ethical values. In contrast to today's exam-centric education, ancient learning encouraged questioning, debate, and self-reflection. For modern youth, rediscovering this balance can help develop not just successful careers, but meaningful lives rooted in integrity and purpose.

Indian systems of health and wellness also have strong relevance today. Practices such as Yoga, meditation, and Ayurveda emphasize prevention rather than cure. At a time when students face anxiety, burnout, and lifestyle-related health issues, these ancient practices offer practical tools for mental clarity, emotional balance, and physical well-being. The global acceptance of yoga proves that India's traditional wisdom holds universal value when adapted thoughtfully.

Equally important is the Indian approach to sustainability and coexistence with

nature. Ancient texts and practices highlighted respect for the environment, conservation of resources, and sustainable living. Concepts like water harvesting, organic farming, and biodiversity protection were integral to traditional life. As today's youth confront climate change and environmental crises, these time-tested ideas can inspire innovative, eco-friendly solutions for the future.

Indian knowledge systems also encourage innovation rooted in ethics. Ancient metallurgy, architecture, and town planning demonstrate scientific excellence combined with social responsibility. When young innovators draw inspiration from such knowledge, they can create solutions that are not only technologically advanced but also socially inclusive and environmentally responsible. This fusion of tradition and modernity can help India chart a unique development path.

However, reviving ancient wisdom does not mean rejecting modern science or blindly glorifying the past. It requires critical understanding, research, and integration. Youth must study these systems with an open yet scientific mindset, separating myth from method and tradition from superstition. Educational institutions play a key role in presenting Indian knowledge in a rational, relevant, and contemporary framework.

In conclusion, India's knowledge systems offer more than historical pride; they provide a roadmap for balanced growth in an uncertain world. For today's youth, engaging with this wisdom can strengthen identity, sharpen thinking, and inspire responsible innovation. By blending ancient insights with modern education, young Indians can become thinkers, leaders, and change-makers—rooted in their heritage, yet ready to shape the future.



Vedic Philosophy and Mindfulness:



MANVI KHAITAN

Lessons for the Digital Age

comes from within, not from external approval.

Another key principle of Vedic thought is mindfulness and

The digital age has transformed the way we learn, work, and communicate. Smartphones, social media, and constant online connectivity have made life faster and more convenient, but they have also brought challenges such as distraction, anxiety, information overload, and emotional fatigue—especially among students. In this context, Vedic philosophy and mindfulness, rooted in India's ancient wisdom, offer valuable lessons for achieving balance, improve academic performance clarity, and inner stability in a hyper-connected world.

Vedic philosophy is not limited to rituals or religious practices; it is a system of thought that explores the nature of the self, the mind, and the universe. Central to this philosophy is the idea of self-awareness—understanding who we are beyond our digital identities, achievements, and social labels. In a time when young people often measure self-worth through likes, followers, and online validation, the Vedic concept of Atman (the true self) reminds us that real value

control of the mind. The mind, according to the Vedas, is powerful but restless. Today's digital environment constantly pulls attention in multiple directions through notifications, messages, and endless scrolling. Practices such as dhyana (meditation) and pranayama (breathing techniques) help calm the mind and improve focus. Even a few minutes of mindful breathing or silent reflection can enhance concentration, reduce stress, and improve academic performance for students.

Vedic philosophy also emphasizes balance and moderation, expressed through the concept of Yukti—wise and thoughtful action. In the digital age, excess screen time often disrupts sleep, productivity, and mental health. Instead of rejecting technology, Vedic wisdom encourages conscious usage. This means knowing when to engage and when to disconnect, using technology as a tool rather than becoming controlled by it. Such balance helps students maintain both digital efficiency and mental well-being.



The idea of karma, another fundamental Vedic concept, holds deep relevance today. Karma teaches that every action has consequences, whether online or offline. In the digital world, careless words, cyber bullying, misinformation, or irresponsible sharing can cause real harm. Understanding karma encourages ethical digital behavior—being mindful of what we post, comment, or forward. For students, this promotes responsibility, empathy, and integrity in online interactions.

Vedic teachings also highlight contentment (santosh) and detachment (vairagya). Social media often creates unrealistic comparisons, leading to dissatisfaction and low self-esteem. The practice of contentment helps individuals appreciate their journey without constantly comparing it to others. Detachment does not mean indifference; rather, it encourages emotional balance—remaining engaged in goals without becoming obsessed with outcomes. This mindset can greatly reduce academic pressure and

performance-related stress among students.

Importantly, mindfulness inspired by Vedic philosophy is not about escaping reality but about engaging with it more consciously. When students are mindful, they listen better, learn deeply, and respond thoughtfully rather than react impulsively. Educational institutions worldwide are now integrating mindfulness practices, recognizing their positive impact on mental health and learning outcomes.

In conclusion, Vedic philosophy offers timeless tools to navigate the challenges of the digital age. Its emphasis on self-awareness, mindfulness, ethical action, and balance provides a strong foundation for personal growth in a fast-paced world. For today's youth, rediscovering this ancient wisdom is not a step backward but a way forward—toward a more focused, responsible, and fulfilling digital life.

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