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नई दिल्ली-110002, की ओर से मुद्रित एवं प्रकाशित।

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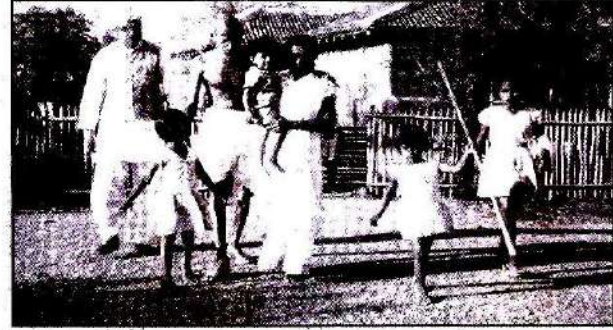
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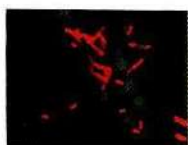
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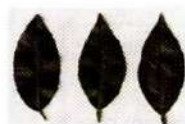
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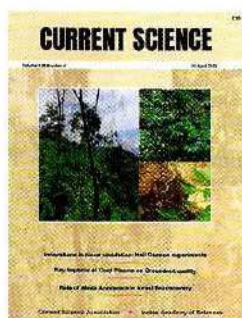


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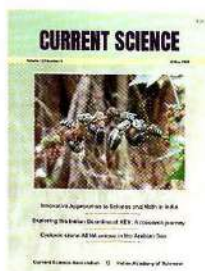
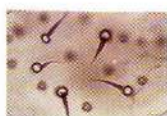
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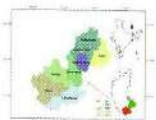
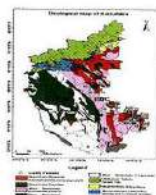
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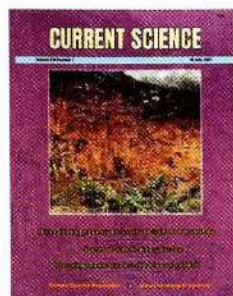
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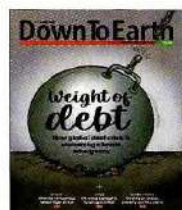
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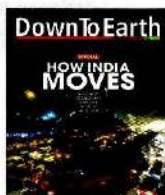
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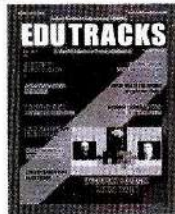
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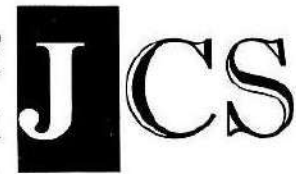
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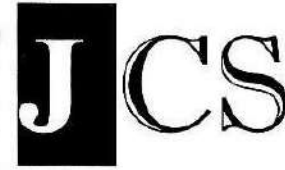
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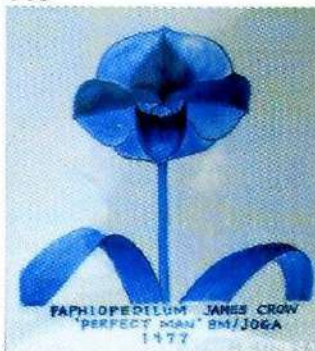
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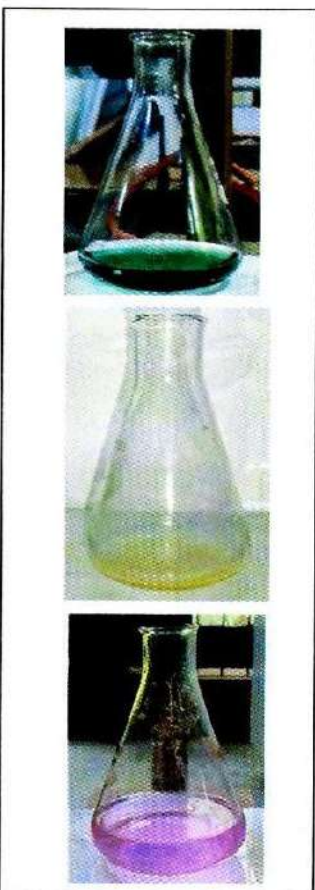
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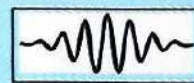
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Prize-winning orchid bred by Motoo Kimura
and named in honour of his mentor,
James Crow. The photo shows a tile painted
by Kimura and given to Crow as a gift.
(Reproduced with permission from
Oxford University Press;
<https://doi.org/10.1534/genetics.112.140657>.)

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James F Crow (1916–2012)
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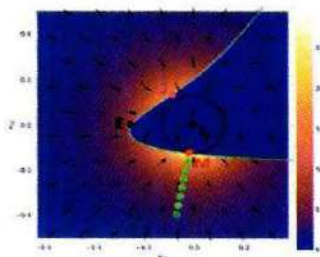
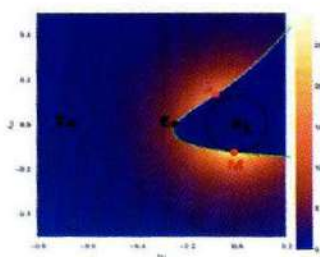
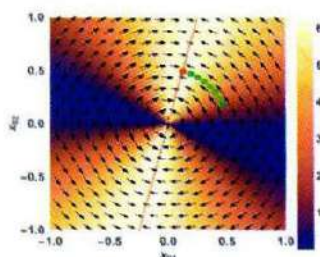
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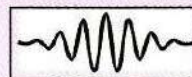
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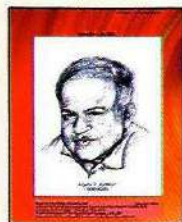
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Jayant V Narlikar (1938–2025)
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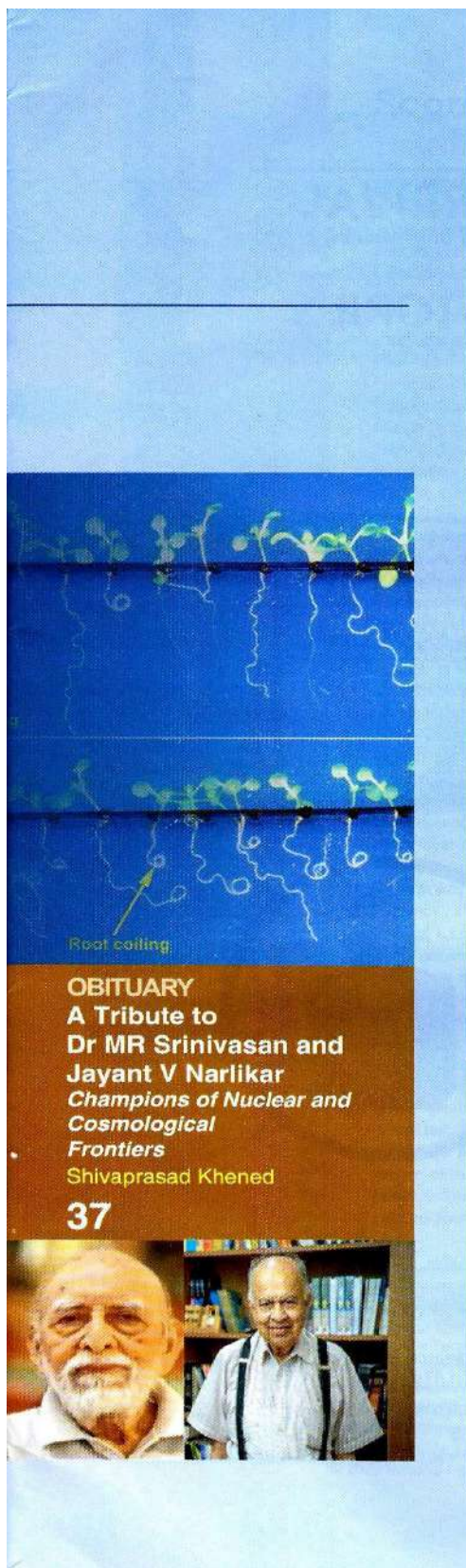
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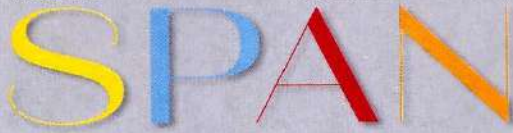
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Front cover: IVLP alumnus Ashutosh Dutt Sharma has applied his learnings from the exchange program through multiple initiatives, including Centers of Excellence like the Drone Tech Park and Medical Cobotics Centre. (Photograph by Hemant Bhatnagar) Printed and published by Gloria F. Berbena on behalf of the Government of the United States of America and printed at Thomson Press India Ltd., 18/35 Delhi Mathura Road, Faridabad, Haryana 121007 and published at the Public Affairs Section, American Embassy, American Center, 24 K.G. Marg, New Delhi 110001. Opinions expressed in this 32-page magazine do not necessarily reflect the views or policies of the U.S. Government.	
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Ashutosh Dutt Sharma's IVLP experience highlights how Quad collaboration supports efforts to build a tech-skilled workforce in critical technologies across the Indo-Pacific.

As countries invest in emerging technologies like artificial intelligence (AI), robotics and cybersecurity, the United States and India—together with their Quad partners Australia and Japan—are deepening cooperation on workforce development. This includes building connections among universities, industry and government to prepare a future-ready workforce across the Indo-Pacific. One example of this collaboration is the U.S. Department of State's International Visitor Leadership Program (IVLP), which facilitates professional exchanges in critical and emerging fields.

The IVLP is the U.S. Department of State's foundational professional exchange program and builds long-term relationships between Americans and international leaders across different fields.

In 2024, Ashutosh Dutt Sharma, chief executive officer of the I-Hub Foundation for Cobotics (IHFC), participated in an IVLP on "Workforce Development for Critical and Emerging Technologies in the Quad," an experience that has shaped his perspective on international collaboration in building future-ready workforces.

A foundation for innovation

Cobotics, or collaborative robotics, refers to technologies that enable humans and robots to work together—a field that represents the convergence of multiple cutting-edge disciplines.

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Multilingualism in Indian Schools: A Boon or Bane?

Sangeeta Chauhan*

India is a land of linguistic diversity, and a home to 22 officially recognized languages along with hundreds of dialects. This diversity is reflected in its schools, where students and teachers often speak multiple languages. The idea of multilingual education has gained in popularity, particularly after the NEP 2020 emphasized mother-tongue instruction in early education. However, the benefits and challenges of implementing multilingualism in schools remain debated. On one hand, multilingualism is seen as a boon that can foster cognitive flexibility, promote cultural integration, and support inclusive education. On the other hand, it presents challenges such as resource limitations, teacher preparedness, and a lack of standardized materials. This paper examines the complex role of multilingualism in Indian schools, weighing its advantages and disadvantages.

Definitions of Multilingualism

- Linguistic Definition:** Multilingualism refers to the ability of an individual or a community to use and understand more than two languages with varying degrees of proficiency. It includes the capacity to speak, read, write, or comprehend multiple languages.
- Sociolinguistic Definition:** Multilingualism is the use of two or more languages by an individual or community in social contexts. It often occurs when different languages are spoken in the same social or geographical area, and can reflect various social, cultural, or educational factors.
- Psycholinguistic Definition:** Multilingualism is the cognitive ability to process, switch between, and manage multiple languages in the brain. It involves not just speaking different languages but also the mental and neurological skills required for handling multiple linguistic systems simultaneously.
- Educational Definition:** Multilingualism in education refers to the practice of teaching and learning multiple languages. It encompasses various approaches like bilingual education, language immersion, and foreign language acquisition programs, aiming to foster proficiency in more than one language.
- Cultural Definition:** Multilingualism is the coexistence of multiple languages within a community, reflecting the cultural diversity of that community. It often involves interactions where individuals or groups use different languages to express identity, heritage, and affiliation to cultural groups.

Advantages of Multilingualism in Schools (Boon)

Cognitive Benefits

- Research indicates that multilingualism enhances executive functions, such as problem-solving, critical thinking, and

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Developing Academic Leadership for Transforming Higher Education Institutions of India

Parimal Vyas* and Kiran Pandya**

Higher education is the cornerstone of economic development, playing a crucial role in fostering sustainable growth. Academic leadership plays a very crucial role in impacting the education system, where institutions of higher learning are tasked with the dual responsibility of preserving ancient knowledge traditions while embracing modern academic practices as envisioned in National Education Policy (NEP)-2020. Academic leadership is central to the evolution of Higher Education Institutions (HEIs), balancing the preservation of ancient knowledge with modern academic advancements (Altbach, 2019). India's academic tradition, from the Vedic gurukuls to institutions like Nalanda and Takshashila, underscores the need for visionary leadership to navigate contemporary challenges and global competitiveness (Mukherjee, 2020). Rooted in a rich and diverse intellectual heritage, India's academic leadership is uniquely positioned at the intersection of ancient wisdom and contemporary educational paradigms. From the Vedic gurukuls to the establishment of modern universities like Nalanda and Takshashila, India's historical contributions to knowledge have shaped the foundation of academic leadership across millennia.

Higher Education Scenario of India: Persistent Issues & Emerging Challenges

Today, as India strives to position itself as a global knowledge hub, the need for visionary academic leadership is more pressing than ever.

In the Indian context, academic leaders are not only expected to manage institutions effectively but also to be the stewards of India's cultural and intellectual legacy, guiding students and faculty through a rapidly changing global educational landscape.

In the recent past, we find paradigm shifts in Higher Education viz., a shift from teacher-centric curriculum to student-centric curriculum, a relatively rigid structure to flexible structure, traditional management to modern new age organisational models, individual decision-making to team-based approach decision making, use of technology in teaching and learning, and localization – nationalization – internationalization in imparting higher education in India.

HEIs are also facing issues related to transparency; limited information disclosure; poor grievance redressal, and weak monitoring

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Digitisation of Higher Education and Global Gross Enrolment Ratio: The Present Scenario

Bhuban C Mahapatra*

Bharat is a developing country with the densest population compared to developed countries in the globe as the United States of America (USA). The population and workforce of the country play a crucial role in its development. The economy of any country depends on its natural resources and its demand, how it has to be managed, utilised and fulfil the other countries' requirements. For its management, workforces are required in terms of the smart and hard work capacity of the countries. It is a global issue that the capitalist countries hire smart workers, whereas the hard workers are left behind in their countries without migration. The poorer workforces are within their territories/ countries, migrating for their survival. The disequilibrium of the economy democratically falls into the hands of poor to poorer people of the country.

If we want to see the developed countries like the USA, more than 6000 Universities are working and promoting global higher education. Whereas, as per UGC, 1215 Universities are working in *Bharat*, but *Bharat's* population is five times more than the USA population. With this respect, *Bharat* needs more than thirty thousand Universities/Higher Education Institutions to fulfil the social demand to a hundred present higher education. The longitudinal effect of sustainable development depends on all twenty areas by UNESCO integrated with the educational goals of any Nation. Education is the nuclear part of Global development, whereas quality education among the people focusing on it is interred and intra-competition among Countries without common interests of the people, the brotherhood of integration without discrimination is possible through education.

From the primitive age to the modern age, the flow of knowledge from individual to group is possible with the help of media and the medium. In the present digital age, information is knocking at your doorsteps through different means. Acquisition of knowledge, understanding, belief, etc., requires the experiences of the people, longitudinal effect and practices. The International Council for Educational Development not only focuses on increasing the increase of gross enrolment ratio of the country but also on how to spread it with quality education is the core area of their work. Digitisation of education with its effect as reach to the unreached without discrimination as a product of Open Distance Education (ODL) through Open Programming (OP). In our country, the Ministry of Education, through the ODL and OP programmes, wanted to provide quality higher education without barriers. Therefore, some selected Category Central Universities have got opportunity to provide and enrich the ODL programme.

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Citius, Altius, Fortius: Advancing Education, Research, Innovation and Entrepreneurship for Viksit Bharat@2047— Part-I*

Ganapati D Yadav*

The Grand Dream of Viksit Bharat@2047 and Role of HEIs

India envisions itself as one of the most advanced and enlightened nations by 2047, with a USD 30 trillion economy supporting a population of about 1.67 billion. I want to witness India emerge as the world's second-or third-largest economic and technological powerhouse. To achieve this magnificent goal, India must transform several metrics across education, research, innovation, industrial policy, healthcare, food and water security, and energy self-sufficiency. Many are embedded in the UN Sustainable Development Goals (SDGs). India will become a developed country if we grow cumulatively by 24% in the manufacturing sector and 70% in the service sector. For this, government policies to transform our manufacturing industries and promote research, innovation, and a start-up culture across all sectors will be crucial. Thus, higher education and its leaders will play a crucial role. Higher Educational Institutes (HEIs) will spearhead this innovation culture and nurture creativity and economic growth. My article will explain how we can achieve it.

Aspirations of luxury and comfort will become universal, and India will not be left behind. The recent skirmish with Pakistan has demonstrated India's technological and innovative power. By the middle of the current century, life expectancy in India is expected to exceed 85 years for men and 90 years for women, which was approximately 45 and 38 years, respectively, a century ago. Much of modern life will be driven by data, with thinking and walking machines as everyday companions. So, I dare say, things will happen at a pace which even in the wildest dream were unimagined.

Some of us, count me in that group, hope to stay alive to experience the excitement and marvels of this transformation when India becomes 'Viksit' by 2047. It is said that there is no tax on imagination, so let me dream a little and share a vision of what will happen *vis-à-vis* the year 2025. I would rather extrapolate backwards from 2047 to 2025 and plan accordingly, juxtaposing India as an advanced economic power. As I stated earlier, government policy will be most critical apart from the talent and technology.

* Bhatnagar Fellow (CSIR), National Science Chair (DST/GOI) & Emeritus Professor of Eminence, Former J.C. Bose Fellow (DST/GOI), Former Vice Chancellor & R.T. Mody Distinguished Professor & Tata Chemicals Darbari Seth Distinguished Professor of Leadership and Innovation Institute of Chemical Technology, Mumbai & Chairman, BOG, Laxminarayan Innovation Technological University, Nagpur. E-mail: gd.yadav@ictmumbai.edu.in; gdyadav@gmail.com

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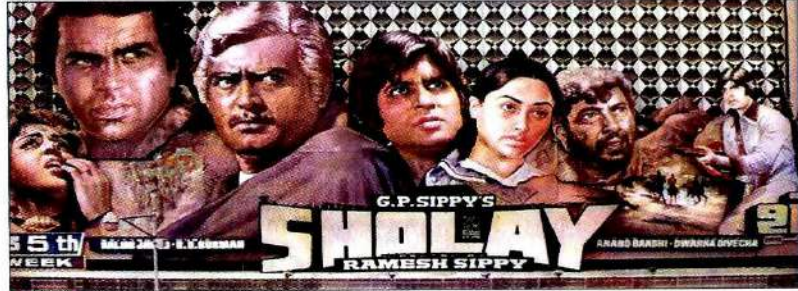
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Let noble thoughts come to us from all sides.
Rig Veda

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