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'Learning English is a conscious process'

Face to Face

PRASANTA J BARUAH
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Sawpon Dowerah, an English language teaching specialist, says that quality and motivation of teachers is of utmost importance in English teaching.

Sawpon Dowerah is an English language teaching specialist. A postgraduate in English, he has trained in Central Institute of English and Foreign Languages (CIEFL), now English and Foreign Languages University (EFLU), Hyderabad and in Reading, UK in Applied Linguistics.

He was associated with textbook publications under the Board of Secondary Education Assam (SEBA) and Krishna Kanta Handiqui State Open University (KKHSOU) and All India Radio (AIR) educational broadcasts.

Can you briefly outline the tradition of English language teaching in Assam?

The tradition of English language teaching in Assam goes back to the 19th century when the British realized that the people of the State needed to be associated with the administration by providing them with education necessary for administrative purposes. Hence, the government proposed steps to introduce English education in the State. The setting up of an English school in Guwahati in 1835 by the British followed by the contributions of the American Baptist missionaries to spread school education in a number of towns in 1845 with Assamese as the medium was a laudable step in the history of school education in the State. Following a series of Despatches and Education Commissions and National Policies of Education, school education in Assam laid the foundation of higher education with the founding of Cotton College in 1901.

What are the challenges of learning English as a second language?

On learning English as a second language (L2), a learner is faced with two basic challenges. One of them is related to English as a mode of oral communication and the other as a medium of reading and writing.

The latter challenge with reference to English as a mode of oral communication is the pronunciation of English sounds which

a learner finds to be quite different from the sounds in the learner's mother tongue (MT). The learners begin to discover that some sounds of English do not exist in their MT or first language (L1). In addition to the challenges of individual sounds, there is the challenge of proper use of stress, rhythm and intonation.

The other challenge is with reference to reading a piece of authentic text in English. According to teachers' feedback on learners' reading competence, the general impression is that most students have to struggle with the passage to achieve some sort of comprehension. However, this problem today is fairly minimized in view of the demands of the question paper of Board examinations to tackle a reading comprehension passage.

What is the difference between learning English for native speakers and non-native speakers?

The basic difference between learning a language as MT by native speakers and learning a second language is that learning the L1 is a matter of acquisition while learning the L2 is a matter of learning. Acquisition is an unconscious process while learning is a conscious process. Noted linguist Noam Chomsky believes that children are born with special language learning abilities. They do not have to be taught their MT or corrected for their mistakes. They learn their MT by being exposed to it, their linguistic rules on using the language develop unconsciously. Children are said to be born with a language acquisition device which include basic knowledge about the nature and structure of human language. On the other hand, an L2 learner attempts to work out the meaning and uses of words, grammatical rules and other aspects of a language. The learner makes generalizations of grammatical rules and draws conclusions and inferences on grammatical rules. The learning process becomes a conscious effort to learn the L2. This is the reason why English L2 learners need grammar books, work books



and other teaching-learning materials.

What is the approach of vernacular schools in learning English at the primary, middle and secondary levels?

It is rather difficult to pinpoint the approach that would work in a given school. Syllabus designers and writers assigned to develop textbooks may have an approach in mind, like for example, the structural approach that argues against using the MT in teaching English on the ground that the 'pull of the mother tongue' can have a very negative impact on the learner. However, in the real classroom situation, such a belief has proved to be less effective. The reality is that - (1) Learners perceive sounds in the new language in terms of their MT to which they have already been exposed. Thus, one of the ways of practising the correct sounds of English is largely a matter of remedial teaching through minimal pair drills with an amount of L1 input. (2) Sentence structures produced by the learner do not reflect the structures of the learner's L1. It could be a hasty generalization due to insufficient L2 input. Hence, the bilingual approach can be one of the most learner-friendly approaches in vernacular medium classrooms. Alternatively, one can rely upon eclecticism in classroom meth-

odology - taking the best of all approaches.

Is over-emphasis on grammar discouraging for language learning?

The notion of acceptability of the learners' language is determined by two factors 'grammaticality' and 'appropriateness'. Grammaticality implies that a sentence is considered acceptable when it follows the rules of a standard grammar book, whereas appropriateness is largely a matter of sociolinguistic competence. An utterance requires to be appropriate for a particular context or a situation. A sentence like - 'Give me your newspaper' uttered by a fellow passenger in a bus can be made appropriate by following the rules of decent social behaviour that requires the person to rephrase the sentence as - 'Can I borrow your newspaper please?' Over emphasis on grammar without awareness of the social context may prove disastrous. There is a need for constant practice of grammatical forms in contexts.

How do you assess the quality and motivation of the English teacher?

Quality and motivation of teachers being a matter of utmost importance, it needs to be stated that during the past half a century, there has been extensive efforts to improve the quality of teachers through in-service educational programmes by various agencies like the State government in association with State Council of Educational Research and Training (SCERT) and the British Council, the former SEBA and Assam Higher Secondary Education Council (AHSEC) and English Language Teaching Institute (ELTI) among others. Besides AIR Guwahati, through its teachers' broadcast programme has taken training programmes to the teachers' breakfast tables. There has been an urge towards exploring innovative techniques by teachers to make classroom practice more committed and interesting than ever before. The need for developing child-centred approaches have gained priority over others.

8/5/16

Poisoned Ivy

Amid the Trump-created Harvard crisis, my advice to students is simple: stay calm and have a pragmatic Plan B



VIRAL DOSHI,
Career Guidance
Counselor, Mumbai

"Ivy League colleges cannot survive without international students. They are the backbone of American's academic strength. This situation is temporary. It will pass."

I've been saying this often these days, more to calm the nerves of students and their parents than anything else.

For over two decades, I've watched thousands of Indian students chase the American Dream—an Ivy League degree, a highly paid job in the US and a life of global success. I've walked this journey with them—from the nervous excitement of SAT prep to nail-biting decision-making moments.

Now, for the first time in my career, I find myself in the eye of an entirely new storm: the growing uncertainty in US college admissions for international students. And, yet, I remain calm. Because I know the system is cyclical rather than permanent.

HARVARD'S LEGAL BATTLE

Much of the current anxiety stems from the ongoing legal battles involving universities like Harvard. After the Donald Trump administration barred the University of Harvard from enrolling foreign students, a recent court ruling has allowed it to seek international students, but many logistical roadblocks remain.

Roughly 20% of Indian students who have got admission to American colleges and universities this year have already got their visa. About 40% have secured interview dates. The remaining 40% are stuck—waiting for I-20 forms, which are eligibility certificates issued by a college or a university that is necessary to apply for a student visa, or struggling to find open visa slots. No new interview appointments are being issued right now. And we are in June. The August intake is looming large and, understandably, parents are stressed.

My advice is simple: stay calm and have a pragmatic Plan B. Many families are now exploring alternatives like the UK and Singapore, or even returning to top Indian universities.

But most students still want to hold out hope. They know—as I do—that there's still nothing quite like a US college education.

The Determined One: They're willing to lose a semester or even defer a year, just to make it to their dream US college.
The Flexible Planner: These students are seriously weighing options like the UK, Singapore and even top Indian colleges.
The Hopeful Waiter: They are waiting, well, waiting, believing that visa processes will be resolved in time.

And there's reason to believe they will. The pressure on the US government to resolve this is mounting—economically, politically and diplomatically.

GETTING IN

The other battle is just getting into an American college. With Common Application, AI-assisted evaluations and higher global applications, US colleges



Harvard University students wearing graduation gowns walk through Harvard Square in Cambridge, Massachusetts, on May 28

(Reuters)

Roughly 20% of Indian students who have got admission to American colleges and universities this year have already got their visa. About 40% have secured interview dates. The remaining 50% are stuck—waiting for I-20 forms or struggling to find open visa slots

have never been more selective. Consider that the University of Pennsylvania's acceptance rate dropped from 28% in 2018 to just 3.4% in 2021. Boston University's went from 55% to 18.1%. New York University's fell from 30% to 10%.

More than 80% of Indian undergraduate applicants to the US are disappointed with the outcomes. Many of them feel they deserve better. But they are up against a system where nearly 50% of students locked up by MALIC candidates—Afghanis,

Afghans, Lagunas, Danons and Children of Poverty and Administrative.

The competition is only intensifying. The pipeline of Indian applicants is growing rapidly. Students from second- and third-tier towns now outperform their metro-city peers, fuelled by better schools and greater ambition.

There has been a huge jump in high-quality institutions across India. IVI (Ivy League) schools have grown from 100 in 2010 to 175+ today. A-Level schools have doubled from 100 to 200+ in the same period.

The US still offers world-class education, but the post-graduation road is no longer guaranteed. A four-year undergraduate degree now costs upwards of \$40,000, while an MBA degree can cost \$80,000 or more.

Yet, only 40% of Indian students who are graduating this year have secured jobs so far. Even in high-demand fields like computer science, the number was lower than expected. Ivy League MBAs are not immune either—20% of Harvard

MBA graduates were unemployed three months after graduation in 2022. At Stanford, that figure was 18%, nearly double from just two years ago.

Meanwhile, visa uncertainty continues. Optional practical training (OPT) and H-1B rules for visas remain inconsistent. Standardised testing, like the SAT, is making a comeback—adding yet another layer of complexity.

As the statistics, I encourage students to redefine what success looks like. Elite institutions are fantastic platforms but they aren't the only route to achievement.

I often remember *Where the Gods Go Is Not Who You'd Hope From* (Brahm). It's a wake-up call for those obsessed with prestige. At the end of the day, real success depends on character, curiosity and grit—not just a brand name.

Some of my students are exploring Indian post-grad options like the IIMs. Indian companies increasingly value homegrown talent—those who understand the market and are hungry to build

something here.

This isn't the new normal. It's a moment in time. My message to students and parents is: stay flexible, stay informed and keep your eye on the long game. Be prepared to pivot. Don't let the year's worth of a college name or a country's immigration policy.

The path ahead demands resilience—the ability to adapt, to reinvent oneself to embrace uncertainty. We are entering an era where resilience will matter more than eloquence. That's what I tell my students when they call, worried, sometimes in tears. I remind them that uncer-

The US still offers world-class education, but the post-graduation road is no longer guaranteed. A four-year undergraduate degree now costs upwards of \$40,000, while an MBA degree can cost \$250,000 or more. Yet, only 40% of Indian students who are graduating this year have secured jobs so far

tainty doesn't equal failure—it's just part of growth.

In recent months, I have also found myself having deeper, more philosophical conversations with families, which I never used to have 10 or 15 years ago. Parents are beginning to ask not just how to get in, but why they are pursuing this path in the first place. And students are more reflective. They care more about alignment—between their questions, purpose and the education they seek. It's no longer just about getting a US degree. It's about building a life that feels meaningful.

My role is no longer just about helping them get into a college—it's about helping them think bigger, with confidence, normalcy where they land. After all, the dream isn't changing. It's just getting more real.

The path may no longer be straight. But for those willing to stay the course, it can still lead to something extraordinary. The Ivy League dream is still alive—but maybe, just maybe, it's time to dream wider.

(As told to Lijie Phyllis)

—SPT/12

For three decades, a software engineering degree was as close to a job guarantee as it could get for India's middle class. AI has painfully disrupted that certainty

Swathi Moorthy &
Annapurna Roy

A history going viral recently suggests, back in the early 1990s, Infosys cofounder Nandan Nilekani had prodded and persuaded actor and playwright Gurish Karnad, a distant relative, to lay into the then-obscure software firm's IPO. As told to journalist Rollo Benin, author of *I Am on the My List: Murder and Myth-making in South India*, Karnad eventually gave in and bought some shares of Infosys. Within 15 years, as Infosys—and India's burgeoning IT sector—grew, the share prices skyrocketed and helped Karnad out of a lower-middle class living to greater comfort, like a house of his own.

Transformative. There is no other work that encapsulates what C++, Java and Python did for India and millions of folks like Karnad, beyond shareholders, once and once carried with them the aspirations of millions of youth who gained not just employment, but a living that lifted their families out of the lower middle-class trap, powered by large salaries, lucrative stock options and promise of foreign postings.

So far so good. Then, out of nowhere, came the threat from artificial intelligence (AI). India's middle-class dreams, written in the promise of software, is now under threat from advancement of that very software.

The jobs that millions of students had taken for granted as an entry-level job and successful career are being taken from them, and a thirty-year dream is starting to look bleak.

The drastic shift is leaving a bloody trail of laid-off employees, changing job descriptions and under-skilled young engineers.

UNCERTAIN FUTURE

Pradeep (name changed), a techie in Bengaluru, job-hopping. This isn't the best time to be looking for one, but he does not have a choice as his company's revenues, fired him five months ago, along with close to a dozen colleagues.

The last time he was looking for a job was in 2018 when he was a final-year engineering student. Back then, all that the uniforms he was wearing had earned was self-programming knowledge.

After six years, he was laid off and there are more things he is worried about than getting the bonus right. "Even if I get a job, how long can I hold on before the company decides otherwise? Is this going to be the end of my career?"

Things are worse for junior developers just entering the workforce where AI tools can do a much better job. Their days are now marked by anxiety, fear and insecurity that threaten careers, but they don't keep up with the change, and at times even when they do.

Shruthi (name changed), a mutual funds manager, is a Bengaluru-based IT services firm a decade ago, remembers how worried they were when automation was introduced. "We were worried that our jobs would be lost," she recalls in an

interview. That never came to pass in the five years she spent in the firm before moving to consulting. But today, testing is one of the areas seeing the most automation, and others such as front-end back-end development are seen likely to follow.

RISE IN ANXIETY

All of this, potentially, is leading to mental health issues.

Harpreet Singh Saluja, president of IT professionals' welfare association NITES, has been seeing increasing anxiety in young professionals with up to five years of experience, who were beginning to feel they were being gradually sidelined or replaced.

"Many are unsure whether their job will still exist in the next six months or a year," Saluja says. "Many single projects that you do, they track how many AI tools or AI integrations you are using. They don't always say it, but the bottom line is that if you don't, your job is at risk," says Pradeep.

In long Reddit threads, software developers have been sharing how their department heads emphasise using AI tools and automating things that were doing documentation, something that has always been easily automated.

For the moment it is such to their own.

BARRENNESS AT PLAY

To stay relevant, many are upskilling and learning AI first thinking and how to use software tools using AI. Platforms such as Skiller Academy, Newton School and leading insurers are seeing huge demand for their online courses on AI and ML.

"It is a six-month weekend course, which is a mix of lectures and hands-on exercises," says Srividya Ramachandran, co-founder, codingnations.

While new-age tech tools profit, engineering colleges that were trained

THE 30-YEAR BOOM

IT'S IMPACT IN INDIA

Job Creation:

IT sector employs over 5.6 million people in India as of 2024

Economic Growth:

IT contributes nearly 8% to India's GDP

Global Recognition:

India handles about 55% of the world's IT outsourcing

Urban Development:

Bengaluru alone houses over 1,500 IT companies

Increased Exports:

IT exports crossed \$200 billion in 2023

Skill Development:

Over 1.5 million engineers graduate annually, many entering IT

Startup Boom:

India has more than 200,000 startups, with many in the tech sector

Digital Infrastructure:

Over 650 million internet users drive digital growth

Rural Impact:

Government e-services now reach 600,000+ villages

Youth Empowerment:

Around 65% of IT workers are under the age of 35

across the country over the last few decades are just not equipped for this transition, and that is resulting in students charting their own course.

Take Rachit, just now withold to professionalise, a second-year computer science student. He realised that despite engineering colleges might not help. After preparing for JEE-NEET, he decided to pursue a four-year undergraduate degree with Newton School of Technology, which focuses on AI.

An avid programmer from Class 8, he taught himself Java and then Python, and is currently intercalating at one of the top AI startups in India and in his words, "is loving it".

As Nishant Chandra, CEO, Newton School, points out, the ecosystem is changing fast and students need to change with it. Chandra reckons that unfortunately about 60% of the colleges are not keeping looking, and that will impact the students.

Pradeep (name changed), a third-year engineering student, and his classmates often discuss what AI would do to their prospects. "We are still a year from when we have to face it, but at present, we are unsure what we would do," he says.

Pradeep, who hails from a tier-2 town in Kerala, is doing computer science in Coimbatore. Ask him if the college is taking additional initiatives to equip them, and he is confused. "We have not heard anything from the college. Maybe we will see something before we start placements next year," he says.

Unfortunately by the time reality hits, it might be too late for students like Pradeep.

SKILL GAP

Neel Sharma, CEO, TeamLease Digital, says most engineering graduates are not completely ready for AI jobs.

"More than 60% of these students don't have enough hands-on knowledge and experience," says Sharma, adding that beyond college degrees, what's needed is certifications in AI, cloud, security or data science, working on real projects like building apps on GitHub, and joining hackathons or internships. "Students who keep learning and can show real projects or skills will have the best chance of getting hired in today's job market."

Neel Sharma, CEO of TeamLease Digital, says most engineering graduates are not completely ready for AI jobs: "More than 60% of these students don't have enough hands-on knowledge and experience. Students who keep learning and can show real projects or skills will have the best chance of getting hired in today's job market"

That's not going to be easy. "We can't just learn one or two skills and assume that it will take us through the next five years," says Savita Hortikar, global head of talent acquisition at the AI company Praxai, adding that adapting to the new reality of "continuous learning" is often harder for experienced professionals than freshers.

IT CEOs have indicated that AI-led productivity is changing the business model, with revenue growth and headcount growth being de-linked. "The last couple of years, we have been challenging our teams on how you can deliver twice the revenue and half of the people," said HCLTech CEO C Vijayakumar in February.

This means AI taking over grunt work and human focusing on strategy, ethics and innovation, says Kripa Kaistha, regional managing director-APAC at recruitment firm AME.

That is going to complicate things. India is home to the second largest pool of software developers in the world, with 8.5 million professionals. It also produces around 1.5 million fresh engineers every year. However, just 16% of them have the ability to secure jobs, according to a TeamLease report.

So the question of higher-level output is going to be a huge driver across both the individual and the system change their orientation.

Government, companies and

IT CEOs have indicated that AI-led productivity is changing the business model, with revenue growth and headcount growth being de-linked. "The last couple of years, we have been challenging our teams on how you can deliver twice the revenue and half of the people," said HCLTech CEO C Vijayakumar in February

A NEW NORMAL

Decline in hiring for roles in manual software testing, basic front-end development, IT support and data entry in the past year

Share of code that Cognizant has said can be written by AI

Source: TEAMLEASE, COGNIZANT

institutions need to work together and create courses that match what businesses actually use now, says TeamLease's Sharma.

Nitin Pal, director of Yakshashila Foundation, a centre for research and education on public policy, says that as long as companies and workers are prepared to learn, adapt and adjust, India will benefit from the AI revolution just as it has benefited from previous turns of the tech cycle.

Shruthi Sharma, head of corporate development, Sasata Software, says self-skilling has also become non-negotiable with AI-led firms not being a baseline expectation.

"Skilling programmes must evolve from being theoretical to being outcome-focused, anchored in the realities of a tech-driven, rapidly changing business landscape," she says.

"While we have a number of skilling programmes underway, I think they are too disaggregated," Sangeeta Gupta, SVP & chief strategy officer of Haseem, recently told ET. "You need much more top-down thinking on skilling, not just for the top end of AI, which is all the data scientists and that kind of work, but for all the working-age population by using AI more effectively in the day-to-day operations."

Until that happens, the pain will linger. As A Damodaran, professor, economics, IIM-Bangalore, says, "We have seen automation disrupting businesses historically. The higher the skill level, the more the disruption, and automation led to job losses. In factories, before automation, many of the workers were handling hazardous materials, and robots eventually did that. And as history would show, people found other jobs. The world keeps going."

Unfortunately for the new generation of millions who were betting on software jobs, history is a hand for too slow.

something here. This isn't the new normal. It's a no.

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The man who stood up to Trump

Alan Garber

The Harvard president, who pushed back against the Trump administration's meddling with the university's affairs, is trying to do a delicate balancing act — shielding the institution from political assault while undertaking reforms that may ensure its survival

AARATIKA BHANUJIK

In May last year, as Alan Garber stepped up to the podium on Harvard Alumni Day, a woman suddenly emerged from the crowd and poured gold glitter all over his head. She then began demanding the release of monkeys from the university's laboratories. With his face still covered in shimmering flecks, Mr. Garber calmly assured the attendees that he was unharmed and then declared, "I hope that Harvard will always continue to be a place where... free speech continues to thrive."

Unknown to him at the time, the physician and economist would soon become a central figure in the pushback against the Trump administration's escalating assault on academic freedom across American university campuses.

The latest salvo in this ongoing conflict came when the Department of Homeland Security revoked Harvard's certification to enroll international students. The move prompted an immediate lawsuit from the university and a swift restraining order from a federal judge. Though the decision is interim, it brought palpable relief to students as the university held its commencement on May 29. In his address, Mr. Garber did not refer to the standoff directly, but his words struck a defiant note: Harvard, he said, welcomes students from around the world "just as it should be".

Mr. Garber's association with Harvard spans over half a century, beginning in 1973 when he enrolled as an undergraduate. He went on to earn three degrees from the Ivy League institution — a bachelor's, a master's, and a doctorate, all in economics. He later pursued a medical degree from Stanford University, where he eventually built a distinguished academic career spanning over 25 years.

Presidency forged in crisis
In 2021, then-Harvard president Drew Gilpin Faust invited him to serve as provost, the university's chief academic officer. Reflecting on the decision in an interview with *The New York Times*, she recalled being

impressed by his calm demeanor and ability to build consensus in moments of conflict. Over the next 12 years, Mr. Garber solidified his reputation as a formidable senior administrator while maintaining a low public profile.

By 2023, he was preparing to step away from administrative duties and return to teaching. However, fate had other plans. That year, Claudine Gay made history as Harvard's first Black female president. But her tenure came to an abrupt end just six months later, following allegations of plagiarism and mounting criticism over her handling of alleged anti-Semitism on campus. Soon thereafter, Mr. Garber found himself suddenly thrust into the spotlight, tasked with steering the university through one of its most turbulent chapters. In his first interview as interim president with *The Harvard Crimson*, he candidly acknowledged that he was assuming office at a "painful and disorienting time for Harvard".

One of his first administrative decisions was to establish twin presidential task forces to address anti-Semitism and biasophobia on campus. His appointment of Derek J. Penslar, a professor of Jewish history, as co-chair of the anti-Semitism task force drew immediate criticism, largely due to Mr. Penslar's prior writings that were critical of the Israeli government. Just over a month later, Mr. Garber made another contentious decision by appointing John F. Manning, a conservative law professor, as interim provost. This move stirred quiet discontent among the university's predominantly liberal faculty.

Around the same time, Harvard adopted a new policy of not issuing official statements unrelated to its "core functions", following the recommendations of a faculty committee.

Its largest academic division also announced that it would no longer require job applicants to submit written statements affirming their commitment to diversity.

What ultimately solidified Mr. Garber's reputation as a resolute leader unafraid to make unpopular decisions for the university's betterment was his handling of the



ILLUSTRATION BY N. HALLER

pro-Palestinian encampment protests that spread across campuses. While many peer institutions responded with police crackdowns, he opted for restraint and dialogue. The encampment at Harvard concluded peacefully after he agreed to expedite petitions for reinstating suspended students and facilitated a meeting between protesters and the university's governing bodies to discuss divestment. To the Harvard Corporation, his measured response exemplified the leadership the university needed. Consequently, on August 2, 2024, Mr. Garber was appointed president through the 2026-27 academic year.

During his 2024 campaign, Mr. Trump pledged to reclaim American

universities from "radical Left and Marxist maniacs", indicating that reining in academia would be a priority in his second term. Initially, Mr. Garber avoided confrontation with the new administration. When the White House announced in March that it was reviewing \$9 billion in grants and contracts over Harvard's alleged failure to protect students from anti-Semitic discrimination, his response was measured rather than defiant. He expressed a willingness to work with the federal task force in outlining the university's efforts to combat anti-Semitism. In a rare personal disclosure, he revealed that he had encountered anti-Semitism himself, even while serving as president.

However, the administration's next move marked a sharp escalation. On April 12, an email from federal officials laid out sweeping demands: federal oversight of faculty hiring, mandatory reporting of misconduct by international students, and the appointment of an external overseer to enforce "viewpoint diversity" within academic departments. Three days later, Harvard released a searing letter penned by Mr. Garber, "No government — regardless of which party is in power — should dictate what private universities can teach, whom they can admit and hire, and which areas of study and inquiry they can pursue," he wrote.

Legal fight with government

In the days that followed, federal officials announced the suspension of \$2.2 billion in grants and \$60 million in contracts awarded to the university, alongside threats to revoke its tax-exempt status. Harvard responded by suing the Trump administration, accusing it of exerting financial coercion to interfere with academic governance. The 50-page lawsuit also accused the administration of violating the First Amendment by restricting what Harvard's faculty could teach students.

Harvard has already announced cuts to degree-granting programmes and halted faculty recruitment. It is also starting down a catastrophic Republican-backed endowment tax bill. Although most of the administration's sanctions are being challenged in court, the litigation will take months if not years. Even if the courts ultimately side with Harvard, appeals are almost certain, and some hits to funding may be irreversible.

Mr. Garber, too, has been compelled to concede ground. Last month, he announced that Harvard would undertake reforms to "focus on individuals and their unique characteristics rather than their race". Soon after, the university cancelled graduation ceremonies for affinity groups. His strategy reflects a delicate balancing act — shielding the institution from political assault while undertaking reforms that may ensure its survival.

THE GIST

▼ In 2021, then-Harvard president Drew Gilpin Faust invited Alan Garber, the physician and economist who enrolled in Harvard as an undergraduate in 1973, to serve as provost, the university's chief academic officer.

▼ In January 2024, he assumed office as President of Harvard after his predecessor Claudine Gay, the university's first Black female president, following allegations of plagiarism and criticism over her handling of alleged anti-Semitism on campus.

▼ When the Trump administration made sweeping demands about faculty hiring and reporting of international students, he said, "No government — regardless of which party is in power — should dictate what private universities can teach, whom they can admit and hire".

Vasanth G.

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In today's digital age, smartphones have become an integral part of life, transforming family communication, especially among adolescents. With India's adolescent population reaching 253 million, understanding how digital media influences their relationships is crucial for shaping societal dynamics.

Today's adolescents are the first generation to grow up fully immersed in digital technology. Data gleaned from my research sample reveal that 86% of Indian adolescents have smartphones, with over 30% spending more than six hours daily online. Platforms such as Instagram and social media dominate, with 72% of teens reportedly addicted to social media. While digital media enables connectivity, it presents challenges. Though 81% of adolescents use social media to stay connected with friends, only 61% communicate regularly with family members. This reliance on virtual interactions has led to a decline in face-to-face communication, weakening familial bonds and raising



Limiting screen time

Combining traditional teaching with controlled digital exposure is a solution

concerns about emotional disconnect.

Excessive screen time affects adolescents' physical and mental health. Sleep disruption is common, impairing focus, academic performance, and emotional stability. Sedentary lifestyles contribute to obesity and related health issues. Emotionally, social media's curated content fosters anxiety, depression, and low self-esteem, as teens compare themselves to idealised online personas. Family interactions diminish further as adolescents become engrossed in their digital

worlds. Parents find it increasingly difficult to engage them meaningfully, leading to emotional gaps within families.

Parents are concerned about their children's dependence on screens, noting difficulty in maintaining eye contact and meaningful conversations. Family time is often sacrificed for digital entertainment, creating a divide between virtual and real-life relationships. Many adolescents find online interactions more engaging than face-to-face conversations, straining



Adolescents should practise self-regulation to control screen time, prioritise face-to-face interactions to develop social skills, and engage in offline hobbies

family bonds and complicating efforts to reconnect. Digital media is not inherently harmful.

Incorporating digital literacy into curricula can educate students about the advantages and risks of technology. Combining traditional teaching with controlled digital exposure can prevent overuse. Awareness programmes for students and parents further bridge knowledge gaps. Encouraging offline activities such as sports, arts, and face-to-face communication helps balance digital engagement.

Implementing tech-free zones in classrooms and collaborating with mental health experts to address digital addiction are essential strategies.

India's National Education Policy (NEP), 2020 advocates hybrid learning, blending online and offline education.

While this offers flexibility, it increases screen time, potentially intensifying issues such as eye strain, inactivity, and digital dependence.

To mitigate these effects, schools and families must work together, establishing routines that balance online learning with offline activities such as outdoor play, family time, and hands-on projects.

Addressing the influence of digital media on family communication requires coordinated efforts: Parents should set limits on screen time through digital curfews. They should engage in co-viewing and shared activities, and foster open conversations about responsible media use, and model healthy digital habits. Adolescents should practise self-regulation to control screen time, prioritise face-to-face interactions to develop social skills, engage in offline hobbies and extracurriculars, and educate themselves about digital media's benefits and risks.

Policymakers should enforce regulations on age-appropriate content, launch awareness campaigns on the psychological impacts of digital overuse, and encourage tech companies to incorporate features promoting healthier habits.

The good doctor and fall from grace

THE pressures of being a resident doctor are hard. At 8 am, you start seeing patients in OPD at AIIMS and are meant to continue till noon or 1 o'clock. But you look outside and see a long queue of people still waiting, so there is no chance of going back to the hostel to get lunch, and if you miss the fixed times, lunch will be over. Some doctors, trying to get through the long line, snub the medical history and examination and simply kick the case down the road, that is, they fill out a requisition slip asking the patient to go to the laboratory for blood tests or radiology for an X-ray or an ultrasound. How the pressure builds on the laboratory and radiology. How can a radiologist write the report without knowing the medical history and symptoms? It's like working in the dark.

If they make it to lunch, they return and start working with their respective specialist in the latter's clinic in the afternoon. These sessions are vital for them to be able to collect enough medical and case material for their thesis. This goes on till 6 or 7 pm. Finally, they used to have two years for their MD, but the pressure to collect sufficient material while doing their other work was immense so we extended it by a year.

Most, rounds of the ward. At during OPD, patients were admitted, decisions have to be made in starting treatment. If they need surgery, they need a pre-operative assessment to be made. Out of the 30-40 patients the doctor is dealing with on the ward, if several need surgery the next morning, it adds up to a lot of work. All the parameters that the specialist will want to know — uric acid, hypertension, vital statistics, haemoglobin levels — have to be arranged. In my time, we had eight operation theatres at AIIMS. Now there are 18. The resident doctor's rounds can last till after 11 pm. At midnight, there can be a call from the emergency department to attend to a patient.

These long shifts are the single biggest cause of stress. In theory, when the duty list is drawn up in every hospital, the shift is technically for eight hours, but the sheer volume of patients that a doctor has to see, along with attending to patients who are admitted, pushes it routinely into 10, 14, 16 or 24 hours. As one of my colleagues once said, "One cannot do anything in medicine well on the face". This is today's reality. When doctors are seeing over 40 patients a day, they know they are practicing substandard medicine.

If India had created good primary and secondary healthcare systems, doctors would not be degraded by patients. This has been one of the failures of Independent India.

For much of their working, resident doctors are on their feet. Most hospitals, including AIIMS, have no rest area where you can grab a nap. We have yet to work out a way of combining this level of work with a measure

In her memoirs, Dr Sneha Bhargava, the first female director of AIIMS — now 95, and who stopped working at the age of 90 — reflects on the pressures and stress on doctors and how the vocation has turned into a profession where making money is perhaps the prime motivation



DR SNEHA BHARGAVA AT THE FIRST IN-INDIA RADIOLOGY CONFERENCE, 1969 (COURTESY: SNEHA BHARGAVA)



THE WOMAN WHO RAN AIMS: THE MEMOIRS OF A MEDICAL PIONEER by Sneha Bhargava. Juggernaut. Pages 280. ₹999

of rest and recuperation. A social life is out.

This way of living and working is possible only because they are young, their bodies are strong and they are hell bent on becoming doctors. I saw many struggling to cope... It's a long haul. It begins with five years of medical school. A one-year internship at a hospital, of which six months have to be spent in a village at a primary healthcare centre. Some students love the break this offers them. The downside is the social isolation. Then three years of residency begin. Nine years in total. After this, it's a question of choosing a specialisation or becoming a general practitioner (GP). It takes 11 years to become a specialist and another 5-8 years before you become a figure that people trust.

It was a good pain when I used to see doctors becoming qualified and leaving to work abroad. We missed the push doctors. The USA — or other countries — created the pull factors. "We have created you. We have spent money on you and kept medical fees low to help you and now you don't want to pay back to society what it has given you?" used to be my reaction.

As to medical students, both desist and snub, I have seen this motivation changing. I used to hear: "I want to serve my state" or "I want to serve my country". Gradually, it became: "I want to make money. My uncle is a surgeon and he makes a small fortune and I want to be like him." Surgery, of course, is at the top of the food chain. Every surgeon I have met has been more arrogant than their medical counterpart. Every single one. They are convinced that they are exceptional.

The word 'vocation' disappeared, and with it, the whole system changed. The old form

of what doctors have had is partly their own responsibility. They abandoned the spirit that infused medicine — the spirit of a sacred duty to treat patients with empathy and with concern for a human life threatened by any common ailment, reputation, glory or income.

I know people think that doctors have to become hardened — or at least dispassionate — to cope with the pain and suffering they see, but that's not strictly true. To be good doctors, they must have empathy and compassion.

The patient-doctor relationship today is delicate and fraught. How patients feel about their medical interactions really does influence the efficacy of the care they receive, and doctors' emotions about their work in turn influence the quality of the care.

Doctors must not lose sight of how patients feel, how they feel the loss of dignity and identity the moment we take their clothes away and lay them in a bed. The only thing distinguishing them from other patients is the particular illness that brought them there. That is when selfish doctors can retreat towards themselves but not for professional or the institution they have pledged to serve. I have seen the system becoming more technologically proficient but emotionally deficient. There are cases of infected wounds and substandard care that have damaged the trust between doctors and patients.

When money becomes the paramount motive, a system of kickbacks emerges. At Siriraj Hospital, we decided not to take patients on a referral basis... When you depend on word-of-mouth patients, it takes time to build up the funds you need... and that is the price that has to be paid.

In an ideal world, patients should visit a GP first, not rush to a specialist. A GP conducts

a physical examination and has the whole body (maybe even the whole family) in mind when listening to a patient's complaint. If a person complains of backache, the cause may be due to the spine or it may be due to the kidneys. The patient does not know that now in India everyone rushes to a specialist, so, having decided their back pain is a spinal problem, the patient goes to a neurosurgeon who is an expert only of the spine and who will start ordering investigations to do with the spine. This loop is a specialist can be disastrous since the neurosurgeon will not even investigate the possibility that the cause of the pain could be elsewhere in the body. The disc is cut. The patient might have needed only a few sessions of physiotherapy and some painkillers. But the patient has entered a tunnel. Perhaps the wrong tunnel.

I used to keep a film of a chest X-ray in the radiology department at AIIMS. It showed a little nodule in the hilar region, the middle of each lung where the bronchi, arteries, veins and nerves enter and exit the lungs. If I showed it to a chest surgeon, he would diagnose a fracture of the rib. If I showed it to a physician, he would say the same nodule was a lymph node. The cardiologist? It's the pulmonary artery. That's why an examination by a GP beforehand is so important. Before honing in on one organ, the whole body has to be considered. By going directly to a specialist, it means that more expensive technology is likely to be used and the costs of healthcare rise. We have killed the GP in India. It has lost all prestige.

Hardly any medical students opt for general practice or family medicine. It differs from person to person but in our society a specialist is given more social respect than a bachelor of medicine or MBBS.

Healthcare is not only dependent on medical care. It also depends on clean water, sanitation and effective sewage systems, in addition, of course, to preventive care. If none of these work, people will fall ill. Some of our best brains have failed to grasp this point.

I do not discount ayurveda, I am sure it has uses, but without research and data from random clinical trials, we cannot establish its efficacy. However, I think the Chinese have got it right. In the fourth year of medical school, students have to learn about traditional Chinese medicine. Under the British Raj, ayurvedic colleges were banned and important texts destroyed, but in China, the sources of knowledge remained. We, too, need to include ayurveda in the medical curriculum so it is the only way to encourage the research that ayurveda so woefully needs. If you ask ayurvedic practitioners to carry out research of their treatments, they cannot do so as they have no training in research.

In an ideal world, patients should visit a GP first, not rush to a specialist. Now, hardly any students opt for general practice

As a formerly 'noble' profession, medicine has slipped. I believe the public should treat doctors simply like any other professional — respect their knowledge which they have spent long years acquiring but no extra respect is required for them as individuals.

Good doctors care about their patients. I know of top surgeons who, the day before a complicated operation, would visit a patient to pray for a successful outcome. I have seen, again, who, conscious of the fact that a human life is in their hands, prayed more for the patient's recovery than the family. The one, that is the definition of care. In my nine-to-five year, it is my wish that the spirit of public service continues to be the guiding force of the medical profession. As Hippocrates said: "Wherever the art of medicine is loved, there is also love of humanity".

— Excerpted with permission from Juggernaut

The public should treat doctors simply like any other professional — respect their knowledge, but no extra respect is required for them as individuals

The university under attack, universities undermined

Universities are facing an unprecedented challenge. While in India the challenge has been growing over the last three decades, in the United States, it has erupted since President Donald Trump took office in January 2025. The challenge has been growing elsewhere too as society's expectations from universities are changing.

The Trump administration is freezing \$3.2 billion of Harvard University's grants and contracts. There is a move to revoke Harvard's tax-exempt status which will cost it a few hundred million dollars. Harvard's President Alan M. Garber has said that political disagreements could pose an existential threat to educational institutions. Because a cut in funds is being used to coerce universities to change their policies regarding student admissions, protests on campus, faculty recruitment, and diversity, equity, and inclusion (DEI) programmes.

In India, the control of institutions of higher learning has increasingly slipped out of the hands of academics to the bureaucracies in the Ministries of Education and the University Grants Commission over the last 40 years. Academics in India are facing growing challenges related to teaching and research. The institutions they work in do not come to their defence, as seen in a recent case of a prestigious private university. All this represents a shift in the fine balance in the societal role of institutions of higher learning. The U.S. system was a model to emulate and even that is being dismantled.

The inherent tension

There is an inherent tension in the social role of universities. On one side they are required to generate socially relevant knowledge to meet the evolving challenges society faces while on the other, they are expected to reproduce the existing societal structures.

To fulfil their creative role, academia requires autonomy. The heart and soul of creativity is what makes societies dynamic. Unfortunately, rulers while paying lip service to this are hollowing it out in practice.

Autonomy enables academics to take a long-term view of emerging social challenges, even anticipating them. Given the accelerating pace of change, by the time society becomes aware of the change, it becomes too late to tackle it. For instance, developments in Artificial Intelligence and social media are leading to challenges for employment, the issue of fake news and the nature of war.

Autonomy enables current orthodoxy to be challenged and facilitates the generation of new knowledge. Without Galileo challenging the Church our understanding of the universe would not have advanced. Further, dynamism comes when academics who are aware of their own assumptions question them.

Academics are a product of a time-consuming



Arun Kumar

is a retired Professor of Economics from Jawaharlal Nehru University (JNU), a former President of the JNU Teachers Association (JNUTA) and Founding President of the Coordination Committee of Teachers' Associations of Delhi (CCTAD). He is also the author of 'Indian Economy since Independence: Persisting Colonial Disruption' (2023).

Autonomy and an anti-establishment character are now anathema to regimes across the world with a narrow agenda

process. We do not know how to produce a Mahalanobis. He emerged out of an environment of freedom of thought that a university provides. In a shotgun approach, the system produces original thinkers who change the course of their discipline and give society new leads. The wider the catchment area, the higher the chance of producing excellence.

Autonomy is needed all the way down the line. Universities need autonomy from vested interests to shield individual academics who generate new knowledge. Autonomy is not just for a vice chancellor or a director of an institute but it must be embedded in the structure of the institutions to enable the autonomy of functioning to individual academics.

Autonomy enables academics to develop their own view of their discipline which guides their research and teaching and which helps them resist orthodoxy and imposition so that originality flowers. Challenging orthodoxy ought to be the second nature of academics which includes their own institutions. While that slows down decision making in institutions, it results in more robust decisions. Authorities running these institutions have to accept this and function democratically. Dissent is essential and not a malaise to be eliminated. A bureaucrat or a bureaucratised academic would not understand this and that is why such people are most often not suited to head a university.

Challenging orthodoxy produces the tension between 'what universities ought to be' and 'what rulers expect' of them. Heads of institutions of higher learning have to negotiate this tension and academics are better suited for it than those with bureaucratised mindset.

Cultivating dissent makes universities anti-establishment while the rulers expect them to promote their agenda and reproduce the existing social relations. A feudal system would not like the birthright of the rulers to be challenged and a capitalist system would want docile labour rather than aware workers who challenge the notion of 'dollar vote' that undermines democracy.

Autonomy as impediment?

The anti-establishment character is anathema to regimes with a narrow agenda and lacking in confidence. They limit autonomy to help push their agenda. They neither need new ideas nor value them, thereby downgrading the role of universities and their social status. This forces academics to become status quoist.

Both rapid technical change and marketisation create a mist of the future resulting in short termism and a stultified view of society's future and the past. Complex ideas are neither understood nor valued and are turned into a caricature. An ahistorical view of society is propagated to fit the agenda of the rulers. Existing divides among people are exploited to

further a narrow agenda and propagate conservatism by caricaturing an increasingly complex society. 'Democratization' via the Internet is helping the process by propagating instant ideas and opinions so that the imaginary is perceived to be the reality. This helps the rulers push their agenda.

The U.S. and China have operated with a long-term agenda which has enabled them to dominate the fast globalising world which is witnessing a rapid evolution of technology and ideas. For this, the U.S. created a huge system of independent universities and research institutes and attracted talent from all over the world. This is now being undermined by the attack on U.S. universities and their faculty.

Funding and autonomy

Columbia buckled under pressure but Harvard has stood firm and challenged the government in court. It has received support from academics and over 150 universities. But why are private universities with big endowments dependent on government funding?

Education and research are expensive. The faculty of universities need funds for projects across the board – in science and technology, social science and art and culture. Science and technology is crucial for development. But so is the social environment in which it flourishes. Creativity is multi-dimensional and requires a holistic view of research.

Funds for higher education ought to be free of strings to preserve autonomy. Private sector funding tends to be largely linked to the profit motive and affords limited autonomy. The burden then falls on public funding. This has been the case not only in India but also in the U.S. Only a liberal ruling regime can consider providing untied funds.

In India, since the private sector spends little on research, public funding is crucial. Post 1991, public funding in India declined in per capita terms and starved institutions of higher education. This has enabled the state to not only curb autonomy but also push its agenda by appointing people of its own proclivity as the heads of these institutions and also allowing them limited autonomy.

The key role of institutions of higher learning is to generate socially relevant knowledge. This requires autonomy to challenge orthodoxy, which makes them appear to be anti-establishment. This is the social tension in their role as reproducers of societal structures and generators of new knowledge. Creeping short termism has led to a simplistic understanding of society and growing conservatism. Often the imaginary masquerades as new knowledge. All this undermines the value of universities in society and they get hollowed out while retaining the façade and none is left to defend their autonomy. This is what Harvard's Dr. Garber pointed to.

A HEAVY BURDEN

AIIMS study flags rising childhood obesity in Delhi, highlights urgent need for coordinated action to ensure healthier futures

A STUDY BY the All India Institute of Medical Sciences (AIIMS) has sounded a warning on an escalating health emergency among school children in the national capital. Of nearly 4,000 students in the six-19 years age group surveyed across Delhi's public and private schools, 13.4 per cent were found to be obese, and 7.4 per cent suffering from hypertension. The data draws an even more sobering contrast when viewed through the lens of socioeconomic status -- 24 per cent private-school students were classified as obese, compared to 4.5 per cent in government schools. Students in private-school were also found to be twice as likely to have elevated blood sugar and three times more likely to exhibit metabolic syndrome -- a dangerous cluster of conditions that includes hypertension, abnormal cholesterol, and insulin resistance. Left unchecked, these significantly increase the risk of early-onset cardiovascular diseases, musculoskeletal disorders, psychological stress, and Type 2 diabetes.

The Comprehensive National Nutrition Survey (2016-18) had already shown that 15.35 per cent of school-age children and 16.18 per cent of adolescents in India are pre-diabetic. Together with the AIIMS study, the implications are troubling. Once grappling with malnutrition, India now faces a dual burden: For urban and affluent children, prosperity has paradoxically become a vector of poor health. Lancet's 2024 Global Burden of Disease Study reported that the number of obese children in India has ballooned from 0.4 million in 1990 to 12.5 million in 2022. This staggering increase is a fallout of rapid urbanisation, the ubiquity of high-calorie, nutrient-poor diet -- often involving ultra-processed foods and sugary drinks masquerading as child friendly and healthy -- surging screen time, and diminishing physical activity.

The AIIMS report signals that student health needs equal and immediate attention alongside academics. The CBSE's recent directive to set up sugar boards in affiliated schools to reinforce the dangers of excessive sugar consumption is a welcome move in that direction. Physical education must be made non-negotiable and junk food driven out of school canteens with the same urgency that was once reserved for tobacco. Parents must re-evaluate lifestyle choices at home. Policy, too, has a vital role. National guidelines on childhood obesity must move from paper to practice. A concerted public-health push that combines regulation, education, and community action to steer children toward healthier futures is vital to stem the crisis. Otherwise, India's demographic dividend stands to carry with it a long and costly health burden.

Table 10



NARESH DADHICH

UNLOCKING THE UNIVERSE

Scientist, visionary, and storyteller — Jayant Narlikar brought the stars closer to India

Some people do not come in through the door but rather jump through the roof. Jayant Narlikar was one of them. In 1964, when Fred Hoyle and he announced in Cambridge University their new theory of gravity, suddenly Jawaharlal Nehru's modern India found a hero in science. It is therefore no surprise that Narlikar became a household name overnight in a country seeking its bearings in the world of science and technology.

He passed away peacefully in his sleep, just two months short of his 87th birthday on July 19, marking the end of an era. He doesn't leave behind a vacuum but a thriving world-class institute in the Inter-University Centre for Astronomy and Astrophysics (IUCAA), a galaxy of young women and men inspired by his work and books; and millions of admirers all over the globe. He has "curved" a special place for himself in "time". That would be the right way to remember him and a fitting tribute.

Today, we should celebrate the life of a great human being, committed to science and its propagation, a man who personified excellence in whatever he indulged in. It is a matter of great privilege for some of us who had the opportunity to work with him at various levels. He had the uncanny knack of getting the best out of everyone by sharing and involving them in things.

Narlikar was an outstanding student at Cambridge, winning laurels, including the coveted Adams Prize, which he shared with

Roger Penrose, who went on to become a Nobel Laureate.

He was among the front-ranking researchers of his time. The Hoyle-Narlikar theory was developed in support of the steady state theory of cosmology, which proposed that the universe looks the same from every point in space and at all times, and that it has no beginning or end. However, this theory eventually fell out of favour as astronomical observations provided strong evidence that the universe had a definite beginning, marked by a massive explosion known as the Big Bang. The term "Big Bang" was actually coined by Hoyle — ironically, one of the main proponents of the steady state theory. Narlikar was, in fact, among the last prominent supporters of the steady state model.

He was a brilliant researcher and had the conviction and courage to ride against the tide and still be held in the highest esteem even by his academic opponents. The distinguished visitors to IUCAA, including Nobel laureates, bear testimony to this fact.

IUCAA was his greatest gift to science and the nation. He wanted to facilitate research in astronomy in universities. It is gratifying to see university students and faculty doing pathbreaking research and publishing their work in front-ranking journals. This is what would have pleased him the most. The thing that stands out most is his missionary zeal to communicate science and its method to young students and ordinary people through his innum-

erable public lectures and science-fiction books. It would be no exaggeration to say that it is this aspect that strongly endeared him to people. There are many renowned scientists in the country, but none have attained his kind of popularity and respect.

To this end, let me recall an incident from 1997 when he had organised Penrose's lecture in Pune's Balgandharva theatre. Such was the demand to listen to him that there was nearly a riot-like situation with people who could not get in shouting and banging at the gates, and, from the other side, Shriram Lagoo was pacifying them, saying that it was their very own Narlikar's event.

The ultimate value of one's work and contribution is how far and how well it is remembered. Besides his scientific work, the two things that will keep his memory alive will be the institute, IUCAA, and his popular writings and science fiction. I am sure that even after 50 years or more, one would certainly come across people who had been motivated by him.

Let me end on a personal note. In 1965, three of us travelled from Vallabh Vidyanagar to Ahmedabad to listen to Narlikar's lecture in the Asira hall. Little did I know then that I would end up spending over half a century intimately interacting and working with him. That is something I will always treasure.

*The writer, a former director of IUCAA, was
10/2/10 Narlikar's colleague for five decades*

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For US, Students Ain't Them

America's real enemies don't disclose their plans online. Provocative posts don't make a person dangerous. So what purpose will social media vetting of foreign students serve?

Siva Vaidhyanathan



Professor of Media Studies

Trump administration's renewed push to monitor social media accounts of visa applicants represents more than just an expansion of surveillance – it's a fundamental betrayal of the principles that have long made America a beacon for international students, scholars, and immigrants seeking opportunity and freedom. This policy, which would require applicants to submit their social media handles and posting history, transforms our immigration system into a digital panopticon that will ultimately weaken both our security and our society.

As I argued in *Antisocial Media: How Facebook Disconnects Us and Undermines Democracy*, social media platforms have already proven themselves to be unreliable narrators of human behaviour and intention. These platforms amplify our worst impulses while simultaneously creating artificial representations of our identities that bear little resemblance to our actual thoughts, beliefs, or character. To base immigration decisions on such flawed and manipulated data is not just misguided – it's dangerous.

The fundamental problem with social media surveillance lies in what we might call the "context collapse" inherent in digital platforms. A joke shared among friends becomes evidence of character. A moment of political frustration becomes proof of radicalisation. A cultural reference or religious expression becomes grounds for suspicion. Immigration officers, already operating under enormous pressure and with limited cultural context, will be asked to interpret posts that even the applicants' closest friends might misunderstand.

Consider the international student who shares a meme critical of American foreign policy or the researcher who engages in academic discussions about controversial topics, or the entrepreneur who uses humour that doesn't translate across cultural boundaries. Under this system, their digital footprints become permanent records that can be weaponised against them, regardless of context, intent, or the passage of time. We're essentially asking people to curate their entire online existence – possibly going back years – to conform to an immigration officer's interpretation of what constitutes "American values" – most likely what Trump's White House demands in

terms of loyalty and fealty to Trump himself.

This policy will have a chilling effect on international students, who represent one of America's greatest competitive advantages in the global economy. These students contribute billions of dollars to our economy while bringing fresh perspectives to our universities and research institutions. Many go on to start companies, conduct groundbreaking research, or become bridges between America and their home countries. By subjecting them to digital surveillance, US is sending a clear message: Your thoughts, your jokes, your political opinions, and your cultural expressions are subject to govt scrutiny before you even set foot on our soil.

The policy also reveals a profound misunderstanding of how social media actually works. Platforms like Facebook, Twitter, and TikTok use algorithmic curation that can make users appear more extreme than they actually are. The "engagement economy" rewards



controversial content, meaning that the most visible posts are often the least representative of someone's actual beliefs. Someone who shares one politically charged article may have their feed flooded with similar content, creating a digital persona that bears little resemblance to their real-world behaviour or character.

Moreover, social media monitoring creates perverse incentives for self-censorship that extend far beyond individual applicants. Knowing that their online activity might someday be scrutinised by American immigration authorities, potential applicants worldwide will begin editing their digital selves years in advance. This creates a global chilling effect on free expression.

The security justifications for this policy are equally specious. Those who genuinely pose a threat are unlikely to announce their intentions on public social media platforms. Instead, they'll either maintain carefully curated public profiles or avoid social media altogether. Meanwhile, the policy will ensnare countless innocent people whose only crime was expressing opinions,

sharing cultural content, or engaging in the kind of normal human communication that characterises social media use around the world.

This surveillance system also raises serious questions about data security and privacy. Immigration authorities will be collecting and storing vast amounts of personal information about foreign nationals, creating a treasure trove of data that could be vulnerable to hacking, misuse, or political manipulation.

Perhaps most troubling is how this policy undermines America's soft power and moral authority. For decades, America has criticised authoritarian regimes for monitoring their citizens' social media activity and punishing them for online expression. How can we credibly advocate for digital rights and freedom of expression globally while simultaneously implementing our own system of social media surveillance at our borders?

The policy also reflects a broader misunderstanding of what makes America secure and prosperous. America's strength has never come from building walls – digital or physical – but from its ability to attract the world's best and brightest minds. Scientists who develop our vaccines, entrepreneurs who build our companies, artists who enrich our culture, and students who fill our universities often come from abroad. By treating them as potential threats to be monitored rather than potential contributors to be welcomed, we weaken ourselves and strengthen adversaries such as China.

Instead of expanding surveillance, we should focus on evidence-based security measures that actually work while preserving the openness that has long been America's competitive advantage. This means investing in human intelligence, improving inter-agency coordination, and developing more sophisticated methods for assessing actual risk rather than digital shadows. Instead, the Trump administration has been driving away from govt service those with experience and expertise.

As we've learned repeatedly in the digital age, surveillance systems designed with good intentions often produce unintended consequences that far outweigh their benefits. The social media monitoring of visa applicants is likely to be remembered as another example of how fear and technological determinism can lead us to betray our own values while making ourselves less secure in the process.

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देशभर में प्राइवेट स्कूलों की फीस में तेज बढ़ोतरी से अभिभावकों पर पड़ रहा है वित्तीय दबाव फ़ीस पर क्या स्कूलों की मनमानी रुकेगी

हिमांशी धवन/हमाली छापिया

पूरे देश में प्राइवेट स्कूलों में शिक्षा का खर्च बिस लेगी तो बढ़ा है, उसने पैरंट्स को परेशान कर दिया है। दिल्ली में एक मामले में अभिभावक सुप्रीम कोर्ट पहुंच चुके हैं तो लखनऊ, मुंबई, हैदराबाद समेत कई शहरों में बच्चों की पढ़ाई के खर्च ने लोगों की बेहाल कर रखा है।

अदालत की सख्ती। दिल्ली में दिव्या मैट्टी के 16 साल के बेटे को पिछले महीने वाउचरों ने क्लास से गिवाल दिया। उसे स्पोर्ट्स ट्रायल में शामिल नहीं होने दिया गया। क्लास के कटसरेप ग्रुप से बाहर कर दिया गया। शिक्षकों के लाने सुनने पड़े। कारण था कि दिव्या और स्कूल के कुछ और अभिभावकों ने फीस में बढ़ोतरी के खिलाफ आवाज उठाई थी। स्कूल का कहना है कि खर्च बढ़ने की वजह से उसने फीस बढ़ाई, छात्रों के नाम बकाया फीस न देने के चलते कोटे गए। पिछले हफ्ते सुप्रीम कोर्ट ने इस मामले में सख्त रुख अपनाते हुए दिल्ली सरकार और प्राइवेट स्कूलों से सवाल किया। शीर्ष अदालत ने पूछा कि अगर निजी स्कूल सरकार से मिली सस्ती जमीन पर चल रहे हैं, फिर दुरुपान फीस में बढ़ोतरी कैसे की जा सकती है?

नर्सरी की फीस लाखों में। लखनऊ के गोमतीनगर के एक मशहूर स्कूल में पढ़ने वाले बच्चे के पैरंट्स ने बताया, 'मैं एक प्राइवेट कंपनी में कंसल्टेंट हूँ, जहाँ सालाना

वेतन बढ़ोतरी 6-8% होती है। अगर बच्चों की फीस 10-15% की साधारण रफ्तार से बढ़ रही है। मेरा बेटा क्लास 4 में है और बेटी क्लास 8 में। बेटे के लिए हर तिमाही में 39,000 रुपये फीस देता हूँ तो बेटी के लिए 42,000 रुपये।'

सरकार से नाराजगी। हर साल अप्रैल में प्राइवेट स्कूलों की फीस 10-40% बढ़ रही है। हाल में 300 किलों के 31,000 पैरंट्स के बीच LocalCircles ने एक सर्वे किया। इसमें से 44% ने बताया कि पिछले तीन साल में स्कूल फीस 50-80% बढ़ी है। करीब 8% ने बताया कि उनके बच्चों की स्कूल फीस में 80% का इन्फ्लेशन हुआ है। सर्वे में शामिल 93% ने कहा कि सरकार कुछ नहीं कर रही, इसलिए स्कूल ऐसी मनमानी कर रहे हैं।

विशाले पर बच्चे। India-Wide Parent's Association की अनुभा सहाय कहती हैं कि स्कूलों के पास वैशुमार ताकत है। जिनका बच्चा स्कूल में पढ़ रहा होता है, वे कहाँ जाएंगे? वो कहती हैं, 'पैरंट्स को स्कूलों की फीस संबंधी माँग समझ नहीं आती और अगर वे उस पर सवाल करते हैं तो उनके बच्चों को टारगेट किया जाता है।' बंगलुरु के सिन्गे सेबेस्टियन के बच्चे की फीस 2013 में 55,000 रुपये थी, जो 2022 में बढ़कर 1.62 लाख हो गई थी। उनका आरोप है कि जब उन्होंने फीस में इस कदर बढ़ोतरी का विरोध किया, तो उनके बच्चे को स्कूल ने निकाल दिया।

पैरंट्स परेशान

● फीस बढ़ोतरी के मामले अदालतों तक पहुंच रहे
● बच्चों की पढ़ाई के लिए लोन ले रहे हैं पैरंट्स

● स्कूल निवेश कर मुनाफा बचाने का जरिया बन रहे
● कुछ राज्यों में स्कूलों की मनमानी रोकने की पहल



पैरंट्स पर दबाव। लखनऊ में अभिभावकों ने बताया कि कौनों टेकल बुकस, मनीडाइन, कोडिंग क्लासेस और शॉर्ट टर्म कोर्सेज के लिए नैशनल एनुएकेशन पॉलिसी, स्कूल की इमारतों के रेनोवेशन, बस-वैन और कॉमन यूनिवर्सिटी एंट्रेस टेस्ट की तैयारी के नाम पर फीस मांगे जाते हैं। फिर किताबें और यूनिवर्सिटी स्कूल की ओर से तय दुकानों से खरीदने को कहा जाता है जो अधिक कीमत वसूलते हैं।

प्राइवेट इक्विटी मॉडल। मुंबई में आर एन पोदार स्कूल की डायरेक्टर-डिप्टिफ अर्जुनिता बोर कहती हैं, 'किसी प्राइवेट स्कूल का एक मालिक हो तो बच्चे की

अकादमिक शिक्षा की खातिर वह बड़िया होता है। लेकिन जब एक प्राइवेट इक्विटी फर्म अपने स्कूल को दूसरी ऐसी फर्म और वह तीसरी ऐसी फर्म की बेचती है तो यहाँ सारा ध्यान स्कूल के वेलफ्यूरान पर होता है। यानी बच्चे की शिक्षा की परवाह किसी को नहीं है।'

कर्म का आसरा। खुदा पढ़ाई का हाल बताते वाला कंसुमर ग्राइंड इंडेक्स दिखाता है कि स्कूल-कॉलेज की फीस अप्रैल 2014-अप्रैल 2025 के बीच 75% बढ़ी, जबकि कॉर्पोरेशन सेंटेंटों और प्राइवेट ट्यूटर्स की 61% तक। ऐसे में पहले जहाँ शिक्षा में निवेश को बच्चे के प्रविष्य से जोड़कर देखा

जाता था, अब वह पैरंट्स के लिए कर्म के जाल में फंसने का जरिया बन गया है। कई लोग अपने बच्चे की पढ़ाई के लिए कर्म ले रहे हैं और कितने चुका रहे हैं।

लोन मॉडल। आज कई वित्तीय कंपनियाँ इसके लिए लोन कांट रही हैं। मुंबई के खार इलाके में ICSE स्कूल ने एक फाइनेंसल टेक्नोलॉजी कंपनी से करार किया है और वह पैरंट्स को तीन EMI ऑफ़ोर्स ऑफ़र कर रहा है। एक पेमेंट प्लैटफॉर्म कंपनी ने बताया कि शहर में ऐसी सेवा ऑफ़र करने वाले स्कूलों की संख्या लगातार बढ़ रही है। PNB MetLife और Nielsen IQ के सर्वे से पता चल कि पैरंट्स बच्चे की शिक्षा और extracurricular activities पर सालाना 5.3 लाख रुपये तक खर्च कर रहे हैं। इसके लिए वे दूसरी जरूरतों की कुर्बानी देने पर मजबूर हैं।

गुजरात मॉडल। इस मुश्किल से निकलने का रास्ता गुजरात जैसे राज्यों ने दिखाया है। यहाँ ऐसी नियामक समितियाँ हैं, जो फीस को लेकर पैरंट्स की शिकायतों पर गौर करती हैं। गुजरात में पिछले दो साल में 6 प्राइवेट स्कूलों पर तय से अधिक फीस लेने के मामले में 50,000 से लेकर 2.5 लाख रुपये तक का जुर्माना लगाया गया। दिल्ली में भी सरकार ने फीस रेग्युलेशन के लिए अध्यादेश लाने की बात कही है और कश्चिप बंगल पीपेसी पहल करने जा रहा है। इसके वावजूद पैरंट्स को नहीं लगता कि बहुत कुछ बदलेगा। 18/5/24

Nobody knows what the halt on visa interviews means and how long it will last. The uncertainty has upended thousands of carefully made plans

ANUPREETA DAS AND PRAGATI K B

In India, the country that sends more students to the United States than any other, young people who had hoped to pursue higher education in America this fall described feeling in a state of limbo after the Trump administration's decision to pause interviews with foreign nationals applying for student visas.

Some are scrubbing their feeds, deleting comments and unfollowing accounts after the State Department said that it would screen social media use. Others are exchanging news and information in newly formed encrypted group chats. And some have sought divine aid in "visa temples"—so called because Hindu devotees say prayers there provide a greater chance of getting a tourist, study or work visa.

Career counsellors have become therapists, and the extended family networks that many Indians have in America—uncles and aunts who will often help finance the education of a niece or nephew—have set up war rooms online. Other students are revisiting their backup plans or rethinking their academic paths.

"I have carefully built my profile to be able to get into the top policy programmes in the US," said Kaushik Sharma, 28. He called it his "dreams" to study in America but added that the current environment was making him nervous about applying. "I don't want to go there and be in a constant state of fear," he said. He is now considering similar public policy programmes at universities in Britain and Singapore, he added. Karan Gupta, a career counsellor who coaches around 150 students a year and works with around six per day, said he had been inundated by calls in the past few days.

"There are students with admission letters who don't know if they will get visa appointments, and those in the U.S. worried about their visa status," Gupta said. Then, he added, there are those planning to apply to US universities next year calling to ask if "it's a safe and stable choice." Gupta said he tried to reassure clients that, statistically, it was unlikely that most students' plans would be upended.

A third of the foreign students in US schools, or around 330,000, are from India. The number has grown, surpassing China in the 2023-24 school year. The trouble began May 22, when the Trump administration said it would ban Harvard University from enrolling international students. Five days later, the State Department said it would pause interviews with foreign nationals applying for student visas as it expands scrutiny of their social media posts.

Although a judge has blocked the administration's step against Harvard, and the State Department has said that student interviews scheduled before its order would proceed, the recent events have left students, their parents and their career counsellors confused and worried.

To many, the Harvard ban on foreign students showed that the Trump administration could bring even one of America's most prestigious universities to its knees.

Shashank Shukla, co-founder of IVY Dreams, an admissions consulting service, said he expected the dust to settle soon, but he noted that the tenor of questions asked by visa officers at the Ameri-



ILLUSTRATION: DEEPAK HARICHANDAN

For Indian students, dreams of America are suddenly in doubt

can Embassy in New Delhi had changed.

Earlier, questions were typically about why a student wanted to attend a US school. But some clients recently told him that they were asked questions that could appear political, such as, "Are you aware of what's happening in the US?"

Those interviews can be nerve-racking at the best of times. In India, some temples have gained a reputation for providing spiritual succour particularly for those going through the process.

At one such "visa temple" in Delhi, a devotee left a note in February expressing gratitude that his prayers had led to a student visa, which had eventually led to a permanent work visa in Britain. "People who are not getting visas come here," said Narayan Mishra, the temple priest.

American universities have produced leaders including Microsoft CEO Satya Nadella and Alphabet CEO Sundar Pichai, both of whom grew up in India and attended US graduate programmes. Gita Gopinath, the second in command at the International Monetary Fund; and Abhijit Banerjee, a Nobel-winning economist and a professor at the Massachusetts Institute of Technology, were also initially educated in India.

The swelling number of Indian students going to the US also has to do with growing wealth in India and the desire for a degree from a "brand name" school, Gupta said. No other country offers as many options as the US, so many students and their parents consider it worth spending about \$40,000 to \$100,000 a year on tuition.

The New York Times

China shaken by US visa crackdown

Across China, students reeled from Secretary of State Marco Rubio's announcement last Thursday that the Trump administration would begin "aggressively" revoking visas for Chinese students studying in the United States. More than two dozen students studying in the US, most of whom did not want their names published for fear of retaliation, told The New York Times that they worried they could lose their academic opportunities in an instant, with little explanation.

In a statement late Wednesday, the State Department announced it was focusing on those who were studying in "critical fields" or who had ties to the Chinese Communist Party and was revising visa criteria to "enhance scrutiny" of all future applications from China, including Hong Kong.

The vague parameters had a chilling effect as students wondered how broadly the Trump administration would apply its new criteria. Rubio did not define "critical fields," but science students felt particularly vulnerable because US officials have expressed concerns about the recruiting of US-trained scientists by China. Nor was it clear how US officials would determine which students had ties to the Communist Party.

The news came amid heightened tensions with China, a broad push to

slash the number of immigrants in the United States and major headwinds in court for the Trump administration on global tariffs. China is a top target in President Donald Trump's trade war. Student visas offer a potent tool for the Trump administration, if the courts allow it. Roughly one-fourth of the nation's total international student population is from China, a cohort larger than any except Indian students, according to a report published last year by the State Department and the Institute of International Education, a nonprofit group.

Professors and laboratories depend on the students' skill as teaching assistants and researchers. At public colleges, university administrators rely on the full tuition Chinese students typically pay to help subsidize the education of in-state students.

At campuses large and small, Chinese students are an American fixture. At the University of Southern California, where international students have for decades been crucial to the campus's academic and business model, Chinese students make up about one-eighth of the 47,000-member student body. "Our international students are vital members of our Trojan family and have been since our founding in 1880," USC's president, Carol Folt, said in a statement last week. "This is a confusing time." NYT

com/jah

Lost in instruction

**SHEIKH MOHSIN AND
ARUN KAUSHIK**

In the meadows of Kashmir lies a school with classrooms, students, and teachers—but little can be said about the quality of education. Rahil, a young boy, dreams of learning but struggles because the language of his textbooks and lessons differs from the Kashmiri of his lullabies and daily life. There is a disconnect between the language of instruction, the language of books, and the language he truly knows and understands. His experience is shared by many across India, where the language of education can feel like a barrier, quietly distancing students from their own stories and communities.

Language is more than a tool for communication—it carries memory, emotion, identity, and a sense of belonging. It shapes how communities connect and share stories and how people see themselves. Yet, for many, access to their language in education and public life remains limited. The Constitution of India recognises 22 scheduled languages in its Eighth Schedule. However, turning that recognition into practice remains a challenge. Article 348 mandates English for proceedings in the Supreme Court and high courts and for official documents, making it feel distant from the language spoken at home by large sections of the population. While Articles 29 and 30 protect the linguistic rights of minorities, the judicial system often prioritises English for consistency—as seen in a 2019 SC ruling that favoured uniformity over the use of regional languages. Hindi and English dominate much of India's administration and education, creating a gap that can make access to opportunities harder for many.

Across India, the challenge of linguistic diversity affects countless lives, often unnoticed by those fluent in dominant languages. In Assam, language has long been a sensitive issue. In 1960, efforts to make Assamese the sole official language led to protests and the tragic deaths of 11 Bengali-speaking students. They laid down their lives during an agitation on May 19, 1961, demanding the abrogation of the Assam Official Language Act of 1960. "Bhasha Shahid Divas", or Language Martyrs Day, is still observed to commemorate the lives lost on that day. This highlights that language in India, as in Assam, is seldom neutral.

After independence, India's leaders faced the challenge of unifying a deeply diverse na-

tion. Article 343 named Hindi as the official language, with English to be retained temporarily for 15 years. But India's linguistic diversity demanded more flexibility. In the 1960s, anti-Hindi protests in Chennai, led by the Dravida Munnetra Kazhagam (DMK), showed that language is not just cultural but also deeply personal and political. These protests led to the Official Languages Act, 1963, affirming India's bilingual approach. The Three Language Policy of 1968 aimed to promote national integration by encouraging the teaching of Hindi, English, and a regional language, but its uneven application, where non-Hindi states often faced greater pressure to adopt Hindi, left some feeling unheard, while others faced fewer expectations.

Amid these challenges, the legacy of Karpoori Thakur, Bihar's Chief Minister from 1977 to 1979, offers a nuanced perspective. Thakur believed that education should reflect the languages people speak. He reduced the emphasis on English in Bihar's Public Service Commission exams and allowed students to write in Hindi, Bhojpuri, Maithili, or Magahi. He also supported village-level councils to teach local dialects, fostering pride in mother tongues. While the full impact of his reforms is hard to measure, his vision shifted perspectives, encouraging a more inclusive approach in an era still shaped by colonial legacies.

English holds a unique place in India. It represents opportunity, modernity, and global connection. It shapes legal discourse, corporate spaces, and urban life. Speaking English can open doors, but for many, especially those divided by caste, class, or geography, it remains out of reach. Today, India has the second-largest English-speaking population in the world, with an estimated 220 million speakers, second only to the United States. The challenge lies not in rejecting English but in ensuring that the embrace of one language does not result in erasure of many others that come from the heart of India.

The idea of a single national language may seem unifying, but India's richness tells a different story. Here, language is not just words—it is history, identity, and spirit. No one language can carry all these roles for everyone.

India's journey toward embracing its linguistic diversity is still underway. Some steps have been taken, but much remains to be done.

(Sheikh is a student and Arun teaches economics at FLAME University)

24/3/7



FLIPPING THE BRASS RAT

Megha Vemuri showed she got a good education. MIT doesn't seem to get it

POOJA PILLAI

STUDENTS AT THE Massachusetts Institute of Technology (MIT), like those at other US institutions, are proud bearers of the American tradition of the class ring. This is a signet-style ring, worn by all members of a graduating class, that bears the insignia of the school. MIT's ring features the school mascot, a beaver, and is called "the brass rat". The insignia is engraved on the flat top, with one side of the bezel featuring a rendition of the Boston skyline and the other side, a view of the Cambridge skyline. While still in school, students wear the ring so that the beaver and Boston's skyline face them. At their commencement, they "flip the brass rat", with the beaver facing away from them, symbolising their entry into the world, while the campus skyline, now facing the students, reminds them of the legacy, and responsibilities, they bear.

Last week, yet another cohort flipped the brass rat and prepared to step into the rest of their lives, carrying knowledge and a history that binds them as a community. In her now-viral speech, this was the precious load that Class of 2025 president Megha Vemuri referred to when she spoke to her fellow graduates about the "privilege of access... to a place like this (MIT)" and the "immeasurable responsibility" they enter the world with. Remove the references to the ongoing destruction of Gaza, the suffering of the Palestinians and the silence or complicity of

A student exercised her right to free speech in order to point to a great injustice in the world where she and her fellow students are expected to play their roles. That was all, Vemuri noted, 'As scientists, engineers, academics and leaders, we have a commitment to support life.' The university's actions, and the widespread denunciation of her words, then beg the question: Are MIT's students expected to demonstrate this commitment only to certain kinds of lives?

institutions like the one she is graduating from, and Vemuri's address is no different from those delivered in other schools, across the US and elsewhere. Like all students, those at MIT, too, have only been preparing for their responsibilities in the world beyond the campus walls. They must now, Vemuri says, actually take on the burden.

The uproar that has followed Vemuri's speech, with MIT barring her from her graduation ceremony the next day and commentators and pundits decrying her attempt to "hijack" the event, follows the same absurd script that has played out in university campuses across the US for almost 20 months now. A student exercised her right to free speech — without calling for violence or hate against any community — in order to point to a great injustice in the world where she and her fellow students are expected to play their roles. That was all, Vemuri noted, "As scientists, engineers, academics and leaders, we have a commitment to support life." The university's actions, and the widespread denunciation of her words, then beg the question: Are MIT's students expected to demonstrate this commitment only to certain kinds of lives? If yes, then who are the people that are to be excluded from this world of responsibility that Vemuri and her cohort enter? That Vemuri understands the double standards that prop up such a view of the world is clear when she notes, "While we graduate and move on with

our lives, there are no universities left in Gaza."

Vemuri is not alone in showing a greater range for her compassion than appears to be allowed to students, and she's not the first to be penalised for it. In Trump's America, foreign students have already been put on notice, their visas — their futures — threatened for the slightest straying from the strict lines drawn by the powers-that-be. Vemuri is a US citizen, so she doesn't have to worry about a visa, but she might have some cause for concern when it comes to her prospects. Is an independent-minded, outspoken person — a brown-skinned woman, no less — considered employable in the US today? Open espousal of the Palestinian cause has reportedly already led to several firings, including at companies like Microsoft and Google. In any case, in an America where democratic norms are under assault from an administration that brooks no dissent, it is scary to be any kind of minority, and not just one that's on a visa.

But that is what's remarkable about Vemuri: She spoke as she did right when she lost whatever protection life as a student offered. Politically active students always tend to be condescended to, told that they don't know how the real world works, but Vemuri appears to be more than prepared for it — with or without the brass rat.

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India's innovation push needs infrastructure and intent

SECOND Opinion

As India strides toward a knowledge-driven economy, the newly launched Research and Development Infrastructure (RDI) Fund is a promising step toward transforming the nation's innovation landscape. Under the visionary leadership of Prime Minister Narendra Modi, AI is no longer just "Artificial Intelligence" but also "Atmanirbhar India." The RDI Fund, aimed at strengthening India's R&D backbone, has drawn praise from fund managers, incubators, and policy experts.

Yet, beneath the optimism lies a crucial truth: capital alone cannot sustain innovation. India's experience over the past decade — particularly in deep-tech — has shown that simply injecting funds into start-ups without building the necessary ecosystem is ineffective. Many start-ups end up outsourcing prototyping, testing, or manufacturing to foreign countries like China, Taiwan, or the US, as India still lacks adequate domestic infrastructure.

Without robust labs, pilot plants, regulatory testbeds, and fabrication facilities, capital becomes a leaky pipe instead of a growth engine. Deep-tech ventures are different from consumer tech — they rely on advanced facilities and long-term support that individual entrepreneurs cannot build alone. This is especially true in Tier 2 and Tier 3 cities, where most of these resources are

absent. Sectors like quantum communication or biopharma require not just seed funding but access to state-of-the-art labs, regulatory mentorship, and coordinated support from academia, industry, and Government. Importantly, India's innovation path differs from that of the US. While America relies heavily on venture capital cycles and federal funding, India's approach is more frugal, collaborative, and socially rooted. Matching dollar-for-dollar investments with global counterparts isn't necessary.

What's needed is a strategic, India-specific model that builds indigenous capacities aligned with national priorities. Globally, successful ecosystems — such as the US National Labs, Germany's Fraunhofer Institutes, or initiatives under the US CHIPS and Science Act — combine financial incentives with physical infrastructure. These models offer domestic testing and validation facilities, helping innovations move from lab to market within their own economies. India must take a similar route. The RDI Fund should focus on building public R&D infrastructure: biotech validation centres, semiconductor fabrication units, and electronics testbeds. Success must not be measured by the number of start-ups funded, but by their relevance, technical excellence, and real-world impact.

Ministries must redefine success metrics — not based on grants distributed, but on market-ready products, patents, and job creation in core technology sectors. India's innovation ecosystem has already shown its potential.



VINAY
PATHAN

In emerging areas like quantum technology, over 40 start-ups have emerged in recent years. However, when the National Quantum Mission was launched, the start-up ecosystem lacked sufficient readiness to absorb and scale the funding. This underscores the importance of ecosystem readiness over capital availability. The Anusandhan National Research Foundation (ANRF), a key player in the RDI strategy, must focus on long-term ecosystem building rather than simply replicating schemes already run by agencies like the Department of Science & Technology (DST), Department of Biotechnology (DBT), or MeitY. Overlapping grants and fragmented structures could dilute outcomes and confuse stakeholders.

What will set ANRF apart is its ability to unify and strengthen India's R&D efforts by aligning national priorities, avoiding redundancies, and nurturing foundational infrastructure. Too often, even well-funded projects stall at the prototype stage due to a lack of manufacturing pathways and industrial partnerships. India must resist the temptation to chase low-hanging fruit or merely count start-ups.

The goal should be to create pipelines for certification, production, and adoption. Only then can deep-tech research escape academic silos and deliver value to industry and the nation. The RDI Fund represents a critical opportunity. But to truly reshape the innovation landscape, it must go beyond capital allocation and become a catalyst for creating a resilient, self-reliant, and globally competitive innovation ecosystem.

(The writer is an Assistant Professor, IIT-Schepet.
Views are personal)

piot

A break that builds you

NANDINI BANERJEE

As Benjamin Franklin once said, "An investment in knowledge always pays the best interest". The gap year in the current academic system is that investment which paves the way to greater returns in knowledge. In a country where career paths are often decided in the early stages of high school, the idea of taking a break from academics sounds radical – but that's exactly what a growing number of students in India are choosing to do. The concept of 'gap year', which is a common practice in countries like the United Kingdom and the United States, is slowly making its way into the Indian education narrative. More students are pressing pause after school or college – not to laze around, but to reflect, grow and realign their goals.

The traditional Indian mindset around education follows a strict uninterrupted trajectory: school – college – job – stability. A break in this flow is often considered a failure or mistake. Parents fear that their children would 'fall behind', and society often equates taking off as a lack of ambition or seriousness. The 2020 pandemic acted as an unexpected equaliser – forcing millions of students into a pause, they did not plan for. Yet, it opened a door. Students began to explore online courses, side hustles and new career paths. The silence of lockdown sparked deeper questions. "I had decided to take a gap year to have more of a single-minded and

tactical approach towards a competitive exam. I made sure to have a daily schedule, practised maintaining a journal, and devoted time to meditation to keep my mind calm. My parents were a bit concerned about how this would affect my mental health but always supported my decision. The concept of gap year has become a household term, and it should be more normalised, in a society where 18-year-olds are expected to know what they would do for the next 45 years. Having supportive people around makes it easier, but self-confidence should be the primary requirement for taking a gap year. I feel one should take a gap year if needed, but mental sanity and physical well-being should also be taken care of," said Aishee Chatterjee, a first-year nursing student who has taken a gap year to reflect on her goals, to come back stronger.

Kazi Silmy Islam, a second-year MBBS student, shared her experience of taking a gap year to prepare for the medical entrance exam. "I decided to take a gap year after my first attempt at NEET (medical entrance exam) did not go as expected. The post-Covid academic disruption and my own need for deeper conceptual clarity made me realise that I wasn't fully ready. So, I chose to dedicate a full year solely to preparing for NEET with a clear, structured plan and a renewed mindset. I tried to build better study habits, understood my learning style and developed emotional maturity by handling

setbacks constructively. Initially, my parents were a little disappointed, as they had high hopes. But my father being a dentist himself, and someone who himself had taken a gap year during his preparatory days, understood my situation. He supported my decision but was also firm that I should only take a one-year gap and make the most out of it. Their concern shifted to support as they saw my dedication and improvement over time. I strongly believe that if someone truly needs time to improve, reflect and re-align their goals, a gap year can be extremely valuable. In my case, it was a turning point that helped me get into MBBS and also grow as a person."

Gap years in India are evolving from mere 'breaks' to deeply productive and structured experiences. Students are exploring new options such as taking up internships or freelance work, enrolling in online certification courses on various platforms, travelling, volunteering, or engaging in creative projects. Some of them often restart their preparation for entrance exams with a fresh mindset, focusing on mental health and therapy. They use this time wisely to gain clarity and not just to rest.

However, gap year comes with its own pros and cons. As the concept of gap year gains traction in India, it's crucial to weigh its advantages and challenges – especially in a system still adjusting to the idea of a 'productive phase'.

Among the several benefits, the crucial one is that it provides a rare opportunity to explore interests, values and goals without the pressure of deadlines or grades. With time to research industries, take online courses or intern in various roles, students are less likely to make impulsive decisions. Again, gaining real-world experiences teaches responsibility, adaptability, communication and problem-solving skills, which are often underemphasized in traditional education. However, one of the major drawbacks is that students, without having structured or clear goals, may struggle to re-enter the academic environment. Despite growing awareness, many still view gap year as a waste of time. Students may face questions or criticism from family, relatives or peers, adding emotional pressure. Unlike in the West, Indian schools and colleges rarely have formal deferral policies or structured gap year programs, making it harder for students to plan or gain recognition for their time off.

For India to fully embrace the gap year, more awareness is needed among parents, schools and colleges. A gap year is not a pause in learning – it's a change in the classroom. Whether it leads to a new career path, personal growth, or a simple sense of clarity, the decision is worth considering in today's chaotic world, choosing to pause is no longer a setback – it's a sign of strength.

The role of law in shaping the future of education

TANISHQ GROVER

Education is widely recognised as a cornerstone of individual empowerment and societal progress. As the world faces rapid technological, demographic, and economic changes, the legal frameworks that govern education play an increasingly pivotal role in

shaping its future. Laws and policies not only establish the rights and duties of stakeholders but also influence the direction, inclusivity, and quality of learning for generations to come.

Legal foundations of education
Education policy and legislation consist of the rules, regulations,

and guidelines enacted by governments at various levels to govern educational systems. These legal instruments define the structure of educational institutions, set standards for curriculum, and ensure accountability. In many countries, such as India, the right to education is enshrined as a fundamental right, with constitutional provisions and landmark judicial decisions reinforcing the state's obligation to provide free and compulsory education to all children between the ages of six and fourteen. The Right of Children to Free and Compulsory Education Act, 2009, for instance, operationalises Article 21-A of the Indian Constitution, mandating quality primary education and prohibiting practices like corporal punishment and ragging in schools.

Globally, international instruments such as the Universal Declaration of Human Rights and UNESCO conventions have set the normative framework for the right to education, emphasising non-discrimination, equal access, and lifelong learning. These legal commitments compel governments to continuously adapt their educational policies to emerging needs and challenges.

Driving equity and inclusion

One of the most significant roles of law in education is to promote equity and inclusion. Legal mandates ensure that marginalised groups—whether defined by gender, disability,

socioeconomic status, or ethnicity—have access to quality education. For example, international and national laws increasingly recognise the need for inclusive education, requiring schools to accommodate children with special needs and to eliminate discriminatory practices. In India, the judiciary has played a key role in expanding the scope of educational rights, interpreting the right to education as integral to the right to life and personal liberty.

Adapting to technological change

The digital revolution is fundamentally transforming how education is delivered and experienced. Laws and policies are evolving to address issues such as digital access, data privacy, and the integration of technology into classrooms. The COVID-19 pandemic accelerated the adoption of online learning, highlighting both opportunities and gaps in digital infrastructure and legal preparedness. Legal frameworks now increasingly address:

1. The regulation of online and blended learning programs
2. Protection of student data and privacy in digital environments
3. Standards for digital content and e-resources
4. Ensuring equitable access to technology for all students

These legal developments are crucial for bridging the digital divide and ensuring that technological

advancements benefit all learners, not just those in privileged settings.

Shaping curriculum and pedagogy

Laws also influence what is taught and how it is taught. National education policies, such as India's National Education Policy (NEP) 2020, set broad guidelines for curriculum reform, teacher qualifications, and student assessment. While policies provide vision, binding laws ensure implementation, accountability, and recourse in case of violations. Legal standards for student-teacher ratios, infrastructure, and teacher training help maintain quality and consistency across educational institutions.

Moreover, as society's needs evolve, legal frameworks encourage the integration of new subjects—such as digital literacy, environmental education, and critical thinking into curricula. This ensures that education remains relevant and prepares students for the demands of the future workforce.

Fostering lifelong learning

Modern legal frameworks are increasingly embracing the concept of lifelong learning, recognising that education should extend beyond childhood and formal schooling. Laws and policies now support non-formal and informal learning opportunities, vocational training, and adult education. This shift is essential

in a world where technological change and economic shifts require continuous skill development throughout life.

Legal education and the future of the profession

The role of law in education is not limited to primary and secondary schooling. Legal education itself is undergoing transformation. Law schools are reimagining their curricula to emphasise not only doctrinal knowledge but also interdisciplinary skills, digital literacy, and social intelligence. As technology automates routine legal tasks, the legal profession increasingly values creativity, ethical reasoning, and the ability to navigate complex social relationships. Legal education must, therefore, adapt to prepare future lawyers for a rapidly changing landscape.

Law is a powerful tool for shaping the future of education. By establishing rights, setting standards, and ensuring accountability, legal frameworks drive equity, innovation, and quality in education systems worldwide. As new challenges emerge from digital transformation to lifelong learning, laws and policies must remain agile, inclusive, and forward-looking. The future of education will be defined not only by technological advancements but also by the strength and vision of the legal foundations that support it.



CONDITIONAL FREEDOMS

Cornered US universities take compliance route

As Trump mounts pressure, not many have a fight left in them. Are large endowments also their weak spot?

JAGDISH RATTANANI

The Ivy League universities in the United States are among the world's richest institutions. Cushioned by large endowments, they also are rich in terms of their scholarship, influence, and networks that make them the global stars of education. The daughter of Chinese President Xi Jinping studied at Harvard. The largest international donation (some Rs 400 crore) to the Harvard Business School came from the Tata group. Along with other select US universities, these institutions stand as icons of stature and achievement. Sometimes decried as islands of privilege, the universities are nevertheless central to the story of America and its global leadership. All US universities together attract more Indian students (331,602 Indians, followed by 227,398 Chinese students for 2023-24, according to Statista) than any other non-US nationality.

The standing and money power should, in normal circumstances, work as a shield that protects these institutions from rough weather. Large endowments quite naturally, it would seem, help keep future operations and growth free of any material worries. But in the complex turn that America has taken today, it is the very standing and money power that have contributed to putting the universities in the centre of a firestorm unleashed by the Trump administration. Protecting and growing the endowments, which the US institutions do rather well, has brought with it charges (whether fair or unfair) that the universities spend more on investment managers to grow their kitty rather than on growing a mission to deliver education for all.

Have the US universities become prisoners of their endowments, making them more vulnerable than they should be? Prof Rashid Khalidi, a renowned Palestinian-American historian at Columbia, put it in these words several months before the current crisis erupted: "For some time now, I have been both disgusted and horrified by the way higher education has developed into a cash register - essentially a money-making,

MBA, lawyer-run, hedge fund-cum-real estate operation, with a minor sideline in education, where money has determined everything, where respect for pedagogy is at a minimum."

Trump and his friends might agree as they gather under the label of Trumpism to declare war on the education system in America. An amalgam of MAGA ('Make America Great Again') politics, with its conspiracy theorists, anti-globalists, and extreme-right conservatives, wrapped in braggadocio that is now the staple of US officialdom, demands that universities follow federal diktats on all manner of functions and operations. Some like Harvard are boldly fighting it out, while others like



Columbia have caved in. Harvard, too, was quiet in the initial two weeks of April this year when a list of demands arrived from the White House and only later broke that silence when new demands got added to the original ones.

The overall picture today is of universities with their backs to the wall, straining to defend their freedoms without going for an all-out fight and holding on only where the administration's demands are so egregious that they are almost impossible to meet. Mostly, the picture is of these institutions looking for a way out.

For example, while there are some statements of support from across universities, the institutes have not put up a robust joint front against the Trump administration, or are unwilling and/or unable to take the issue aggressively to the public or are willing to set up regulations that meet some demands and in the process, showing up the once-powerful bodies as weak and easily trampled upon.

Dissent from within

Consider the imposing Massachusetts

Institute of Technology, MIT. The 164-year-old institution runs a rather popular game called The Moral Machine to understand how humans might want autonomous vehicles to respond to unavoidable accident scenarios in the real world. The Moral Machine has collected 39.61 million decisions in 233 countries, dependencies or territories, according to one paper. For all its efforts to understand the moral dilemmas brought up by the use of modern systems, it took one student and a speech of less than four minutes to hold a moral mirror to the institute. MIT is among the US universities to have research ties, funding or contracts with the Israeli military that runs a genocidal operation in Palestinian territories. MIT has received over \$11 million in research funding from the Israeli Ministry of Defence, according to May/June 2024 'The MIT Faculty Newsletter', an independent forum for the expression of faculty views and concerns.

Taking the stage at the pre-convocation festivities, the elected Indian American president of MIT's Class of 2025, Megha Vemuri, torched the institute she is graduating from: "We will carry with us the stamp of the MIT name, the same name that is directly complicit with the ongoing genocide of the Palestinian people, and so we carry with us the obligation to do everything we can to stop it. Class of 2025 - you are MIT. Pressure is nothing to you."

The bold protest speaks of the merits of a US campus where students find ways to be engaged in events beyond the textbooks and learn to take a stand, add to it the passion, energy, and care-a-damn attitude of their youth to turn it into a potent protest. This is unlike India, where voices don't emerge and are put down when raised, as seen in cases like a teacher who was dismissed in one Mumbai school just because she liked a post that spoke of Israel's genocide.

On the other hand, MIT's statement in favour of free speech that followed Vemuri's speech rang hollow because the president of the class was barred from attending her own graduation. While MIT runs the moral machine and does some exemplary research, Vemuri and her classmates showed that they are moral humans pointing to holes in the imposing edifice of MIT and indeed, the entire lot of US schools.

(The writer is a journalist and faculty member at SPJIMR, Syndicate: The Billion Press)

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Use Foundational Learning as the Key

India's struggle with raising literacy levels has been protracted and patchy. But fresh data hints at real momentum. PLFS 2023-24 pegs the literacy rate (age 7+) — ability to read and write with understanding in any language — at 80.9%, a marked improvement from 12% in 1947. Yet, averages can deceive. Urban India stands at 88.9%, rural at 77.5%. Male literacy is 87.2%, but female literacy trails at 74.6%. States like Bihar, MP and Rajasthan continue to lag.

At the heart of this crisis is a fragile public education system. Poor investments, limited access and under-trained teachers have left millions behind. Socioeconomic barriers like gender discrimination compound the problem and lower basic learn-



ing outcomes. When children fail to acquire foundational skills — reading with meaning and solving basic maths by Class 3 — catching up becomes impossible. Yet, transformation is possible. Mizoram's leap to 98.2% literacy rate — driven by door-to-door outreach, community volunteers and cultural ownership — is proof.

Targeted campaigns like ULLAS (Understanding of Lifelong Learning for All in Society), which targets 15+ school dropouts to restart their literacy journey, show how coordinated effort can deliver remarkable results.

But India must now treat foundational literacy and numeracy (FLN) as non-negotiable. Investing in FLN isn't just about schools — it's about skilling the future workforce, driving social mobility and unlocking economic potential. Without this, the demographic dividend could become a demographic disaster. Equally urgent is bringing back 'public' in public education. Families and communities must see themselves as co-owners of their children's learning journeys. To truly educate India, we must push the envelope. *ET/6*

Why international students matter to the U.S.

Stemming the flow of Indian and Chinese students will affect STEM research in U.S. universities

DATA POINT

Sambavi Parthasarathy

The U.S. has paused scheduling of new visa interviews globally and expanded its vetting of accounts of foreign students on social media. This is the latest move in a series of intrusive measures carried out by the Donald Trump administration targeting international students and premier universities in the U.S.

This decision comes days after the administration tried to block the University of Harvard from enrolling international students. Only a month ago, the government targeted several U.S. universities, accusing them of fostering anti-Semitism. Earlier this year, the government also revoked thousands of international student visas with barely any notice. The administration claims that the move is part of wide-ranging efforts to limit immigration. Data indicate that it could have a significant impact on U.S. universities and the U.S. economy.

The Open Doors International students' data shows that the U.S. hosted an all-time high of more than 1.1 million international students in 2023-2024, a 6.6% increase from the previous year. Students from India and China together formed more than 50% of all international students U.S. last year (Chart 1).

A Data Point article published last month found that the number of student visas issued to Indians by the U.S. dropped by 30% in February 2025, the first month of the second Trump administration, compared to the same month the previous year. This decline was much higher than the overall decrease in student visas granted by the U.S. to all countries combined.

On May 28, Secretary of State Marco Rubio said that the U.S. State Department will work with the Department of Homeland Security to aggressively revoke visas for Chinese students, including

those with "connections" to the Chinese Communist Party or studying in critical fields.

Data shows that international students from India and China are engaged in key science and research fields and contribute significantly to the U.S. economy. They also formed the highest share among international students who applied for Optional Practical Training Extension for STEM Students. This allows eligible F-1 international students with STEM degrees to gain additional work experience in the U.S. and work for an employer (Chart 2).

They also remained the top countries of origin of temporary visa holders earning U.S. research doctorates in science and engineering. In 2023, close to 6,000 temporary visa holders from China and 2,583 from India earned U.S. research doctorates (Chart 3).

They also formed a high share of foreign-born graduates working in science and engineering (S&E) fields and S&E-related fields in the U.S. in 2023. Indians formed the highest share, compared to other foreign-born graduates, across S&E and S&E-related occupations (Chart 4).

In general, international students form a key share among enrolments of master's and doctoral students in the fields of science, engineering and health (Chart 5).

NAFSA's economic value analysis shows that international students brought in \$43.8 billion to the U.S. economy in 2023 through tuition fees, and spending on housing and living (Chart 6). Their estimates also show that international students helped create and support lakhs of jobs in the U.S.

A research paper titled 'Immigrant Entrepreneurs and U.S. Billion-dollar companies' noted that 143 billion-dollar start-up companies in the U.S. have a founder who came to the U.S. first as an international student. Also, 174 international students became founders or co-founders of U.S. billion-dollar companies.



Far from a liability

The data for the charts were sourced from Open Doors, NAFSA, National Center for Science and Engineering Statistics (NCES), and U.S. Immigration and Customs Enforcement

Chart 1: The number of international students to the U.S. in the 2016-17 to 2023-24 period

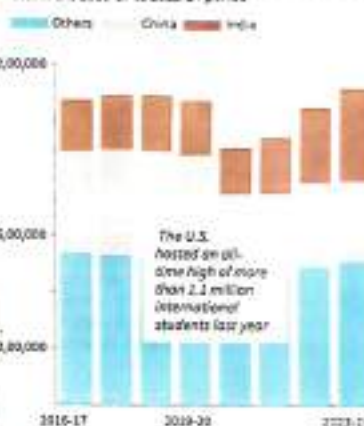


Chart 2: Country-wise number of student exchange programme records with authorisations to participate in STEM OPT

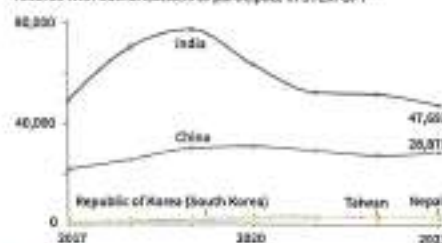


Chart 3: Top countries of origin of temporary visa holders earning U.S. research doctorates in science and engineering

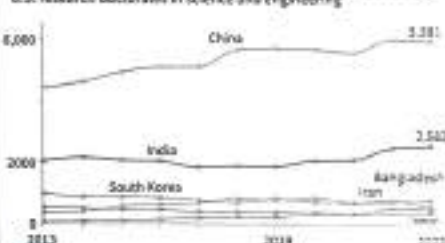


Chart 4: Employed foreign-born college graduates by broad field of occupation in 2023



Chart 5: Economic benefits of international student enrolment to the U.S. Values in \$ billion

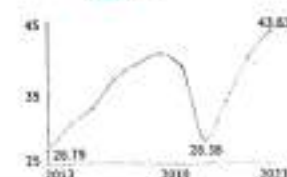
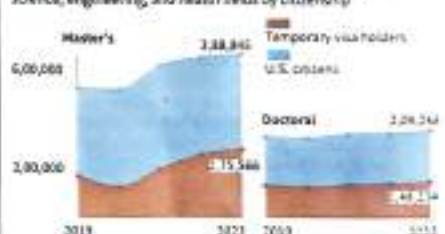


Chart 6: Enrolment of master's and doctoral students in science, engineering, and health fields by citizenship



The NAFSA's International Student Economic Value Tool defines economic value as the amount of money that international students studying at U.S. colleges and universities collectively bring into the U.S. to pay for their education and to support themselves while they (and in some cases, their families) are there in the U.S.

Does the civil services examination need reform?

What changes are needed to make the three-tier exam system a less cumbersome process?

Gopalakrishna, V

The foundations of the present format of the civil services examination can be traced to the Macaulay Report of 1854 which introduced selection by merit and designed an examination on the principle of 'transferability of academic talent to administration'. After Independence, the Kothari Committee (1975) recommended a three-tier examination comprising a preliminary exam, a descriptive main examination and an interview.

The initial format

The preliminary exam comprised of an optional subject and a common general studies paper with a weightage of 2:1 respectively. After the preliminary exam, only the names of the shortlisted aspirants for the main examination were released by the UPSC. The question paper, the marks scored by the aspirants,

and the minimum qualifying mark were kept classified and not made public. For many years this 'black box' nature of the preliminary exams ensured its smooth conduct as there was no 'locus standi' for an aspirant to question the result.

In 2005, with the passing of the Right to Information Act, aspirants flooded the UPSC with queries regarding the rationale of the exams and the UPSC had to disclose its methods which were raised for judicial scrutiny. To resolve this issue, the government appointed the S. E. Khanna Committee in 2010. In 2011, based on its recommendations, the optional paper was replaced with a common paper and the preliminary examination was reconstituted to comprise two papers – Paper-I, covering all conventional areas in General Studies, and Paper-II comprising questions on quantitative aptitude, reasoning and English comprehension. However, this format favoured students from urban

centres with a good foundation in English. As only the combined score of Paper-I and Paper-II were taken, they could qualify at the prelims even though they scored relatively less in Paper-I. This led to more protests and consequently the government made Paper-II a qualifying paper and the marks were not added to determine merit. The preliminary exam continues in the same format.

Further reform

In 2012, the Government appointed the Arun Nigverkar Committee to suggest a new model. The Committee made many recommendations with the aim of making the exams a less cumbersome process. The accepted changes were incorporated from 2013. The new scheme comprised restructured papers in General Studies covering diverse areas like Indian Polity, Governance, Economy, Science and Technology etc. The scheme continues to date. However, there are still distinctions

that must be addressed. First, the preliminary examination, which was designed to select the most deserving, has now become a 'jealous gatekeeper' with the sole objective of reducing over five lakh aspirants to around 10,000. Paper-II, which is a qualifying paper, favours students with a background in Sciences and Engineering and is a challenge for Humanities students. Paper-I, which comprises questions that test knowledge in areas that are needed for a career in the administrative services has become increasingly unpredictable. Due to this an aspirant who appears for the exam with a genuine desire to serve the country and is devoting his prime time to prepare for the same, incurs a huge opportunity cost.

The main examination also needs a few changes. The General studies papers have 20 short answer questions and feedback from aspirants indicates that marks are being awarded for factual points than analysis. There are no 'long form questions' which test the much required analytical skills of the future civil servant. Also, the Annual reports of the UPSC indicate that majority of the aspirants select options that are more scoring than their own domain. This aberration needs to be corrected and the optional may be replaced by two papers which cover governance and policy. It is high time that the exam scheme is revisited.

Gopalakrishna, V is the Director of Brain Tree Hyderabad.

THE GIST

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A GRASSROOTS TEACHER

Pratima Barwa gave wings to dreams of young Adivasi hockey players

CHANCES ARE THAT most outside the modest Indian hockey universe would not have heard of Pratima Barwa. Perhaps she preferred it that way. Barwa, who passed away on Sunday aged 44 due to a brain haemorrhage, dedicated her life to hockey. She did what few could — identify and nurture young talents in one of the sport's biggest catchment areas, Jharkhand's Simdega. Because of her efforts, Indian hockey is in a better place — three players, including captain Salima Tete, are currently part of the national team that is in Europe for the FIH Pro League.

Grassroots coaching is one of the most unglamorous parts of sport because of the lack of incentive. Yet, without such coaches, the sporting ecosystem would be a non-starter. Selfless coaches like Barwa, who was from Khunti, have kept Indian hockey running. Her academy was rudimentary, and some of the coaching methods were, possibly, archaic. But Barwa, described as a "mother figure" by her wards, did something far more impactful — she got children hooked to hockey and gave wings to their dreams.

Barwa's own aspirations to play for India were unfulfilled. She played for Bihar in the early 1990s. However, a left knee ligament injury in 1995 cut short her playing career. She then promised herself that she would help young players from the region. Barwa's journey as a coach began in 2008 after she completed a diploma from the National Institute of Sport in Patiala. A job with the Jharkhand government as a coach took her to Simdega, and the hard yards began. From sunrise to sunset, she would travel to schools and villages where there was the slightest promise of talent, convince the families to let their child play hockey and then groom them into world-class talents. Barwa never got the recognition she deserved. Her legacy will, however, be there for all to see each time the Indian team steps onto the hockey field. *se/a*

Literacy scorecard

80.9% not good enough as inequity persists

INDIA's reported literacy rate of 80.9 per cent marks a commendable milestone, reflecting steady progress in education access. However, the data from the 2023-24 Periodic Labour Force Survey (PLFS) reveals that the nation's march toward universal literacy is hindered by persistent inequalities — most notably, along gender and regional lines. Urban India boasts a literacy rate of 88.9 per cent, compared to 77.5 per cent in rural areas. This rural-urban gap, echoed across various states, highlights the uneven distribution of educational infrastructure, qualified teachers and learning opportunities. Similarly, gender disparities endure, with male literacy significantly outpacing female literacy in several states, despite decades of policy focus on girls' education.

Lakshadweep, Delhi, Tamil Nadu and Tripura show what is possible when governance, outreach and community engagement align. Yet Bihar, with the lowest literacy rate, underscores the complex interplay of poverty, inadequate schooling, cultural factors, and social barriers that impede learning. The figures beg a deeper question: What kind of literacy are we cultivating? While the numbers may check a statistical box, true literacy encompasses critical thinking, comprehension and the ability to participate meaningfully in civic and economic life. These outcomes remain out of reach for many, especially in marginalised communities.

Policymakers must look beyond enrolment numbers and test scores. Equitable investment in quality schooling, teacher training, digital access, early childhood education and local language resources is essential. Adult literacy drives should also be prioritised, especially in lagging states and underserved districts. India cannot afford to confuse statistical literacy with educational justice. The goal must be to not only teach people to read and write but also to empower them to understand and shape the world they live in. T-16

\$4-trillion economy masks inequity and jobless growth



DEEPANSHU MOHAN
DEAN, CP ANGAL
GLOBAL UNIVERSITY

risks becoming a mirage, a *simulation of progress* unconnected from social reality.

Consider this: India's per capita GDP still hovers around \$2,486, compared to Japan's \$33K or Germany's \$54K, and lagging behind even Vietnam and the Philippines. India's \$4-trillion GDP, when divided among its 1.4 billion citizens, shows cracks. Thus, India's average citizen earns approximately 1/13th of a German and slightly less than 1/14th of a Japanese. The symbolism is striking: two nations once seen as economic underdogs now offer a higher average standard of living than the world's fourth largest economy.

This is a call to distinguish economic size from developmental depth. This problem is conceptual. Aggregate GDP is a blunt instrument, better suited to measuring production than prosperity. It counts luxury condominiums and storms at the same time, billion-dollar deals and daily wages alike and tells us who owns assets, who can access formal credit, who inherits safety nets and who remains locked out.

In India, economic mobility is still tethered to geography, caste, gender and inheritance. Without meaningful redistribution, through progressive taxation, asset reform or targeted social investment, the system will remain one of exclusion rather than inclusion.



BIG GAP: The top 1% Indians command 22.6% of the national income and 40% wealth. *NIL PROFI*

According to the World Inequality Report, the top 1 per cent of Indians command 22.6 per cent of the national income and a staggering 41.1 per cent of the wealth. The bottom 50 per cent own just 15 per cent of the income and hold a mere 4.4 per cent of wealth. In Germany and Japan, the bottom 50 per cent hold nearly 20 per cent of national income.

The imbalance in India's rise is most visible in its labour market. This is a paradox where growth coexists with joblessness and expansion leaves the majority of workers behind. Despite over three decades of liberalisation, India's growth model remains stubbornly capital-intensive, privileging high-margin sectors such as finance, IT and real estate while neglecting the labour-absorbing capacity of manufacturing, agriculture and small-scale

enterprises. The result? A 'jobless growth' trajectory that lifts GDP numbers but fails to create meaningful employment for millions.

Over 90 per cent of the workforce is employed informally, without social security, pensions or formal contracts. This becomes a structural fault line. It depresses labour productivity, narrows the tax base and exacerbates inequality by excluding the majority from rights-based protections.

According to the India Employment Report 2024, youth unemployment has risen from 5.7 per cent in 2008 to 11.5 per cent in 2019. The quality of jobs remains poor, often informal, low-wage and devoid of upward mobility. Mass slumming in the female labour force participation, which haphazardly below 20 per cent. Cultural constraints, wife

ty concerns, poor transport and a lack of childcare facilities play a role, but so does an architecture that favours capital subsidies over investments in public infrastructure and services. Japan and Germany, despite ageing populations, have increased women's workforce engagement through robust maternity benefits, subsidised childcare and flexible work arrangements.

Moreover, India's middle class is under increasing strain. Household debt surged to 42.9 per cent of GDP by mid-2024 from 35.5 per cent in June 2021, while household savings fell from 14 per cent of total savings in 2009 to 6.1 per cent in 2023.

The disconnect between India's capital-rich growth and labour-poor reality underscores the need for a rethink.

With a tax-to-GDP ratio of just 6.8 per cent as of December 2024 (it was 9.1 per cent in September), India finds itself with too little fiscal muscle to fund ambitious public goods or progressive welfare. Germany's tax-to-GDP ratio is 38 per cent and Japan's 34.1 per cent. This reflects not only the tax capacity of the state but also the tax intention.

This constraint is compounded by the narrow base of direct taxation. India has hesitated to meaningfully tax wealth, inheritances or large capital gains, mechanisms used widely in OECD economies to fund equitable growth. Welfare

schemes provide only assistance and not any structural uplift. The absence of fiscal federalism also hobbles inclusive development. State governments, responsible for health, education and infrastructure, remain financially starved and dependent on the Centre's transfers. This limits the potential for targeted interventions that account for regional disparities in poverty, caste exclusion and gender gaps.

A forward-looking economic agenda would include a progressive wealth tax, higher marginal rates on capital gains and closing of corporate loopholes that erode the tax base. Expanding public investment in child and elder care infrastructure could unlock female labour force participation while generating millions of dignified jobs. Moreover, formalising informal employment through universal social protection floors, streamlined labour codes and digital inclusion can offer security without sacrificing flexibility. Fiscal policy must evolve beyond austerity-thinking and towards rights-based provisioning, treating education, health and employment not as charity but as citizenship guarantees.

If India is to truly ascend not just in rankings but also in the lived reality of its people, it needs a structural course-correction. It must resolve to building an economy not just of the few, but for the many.

A forward-looking economic agenda would include a progressive wealth tax, higher marginal rates on capital gains and closing of corporate loopholes that erode the tax base.

This is not to deny the real progress India has made. But we must ask: aspiration fulfilled for whom? Because when growth is judged by volume rather than value and size by nominal metrics rather than lived outcomes, it

Language Lineage is Not About Hierarchy

As the (not-too-unexpected) shower of brickbats on Kamal Haasan implies, linguistic elitism can take on novel, more convoluted routes than the old chestnut of 'Hindi hegemony'. Haasan's contention that the Kannada language is derived from Tamil has been hijacked by cherry-pickers to mean that the latter, because of its pedigree, is somehow 'better' than the former. This notion — older the language, greater its wisdom — taken to its elitist extreme, is the source of the latest language row that multilingual India has somehow found time to indulge in.

In the hierarchy of language elitism, Sanskrit sits atop the linguistic slopes, staring down at, say, Hindi and Bengali, even as the former's Urdu and the latter's Portuguese imports remain

sotto voce ('under the voice' in older-than-English Italian). But parenthood doesn't confer linguistic superiority. If that was the case, Prakrit or Latin would have been a better — and more popular — language than its miscegenated descendants like Marathi and English.



Older languages often bask in the glory of their elaborate grammar, their poetic cadence, their perceived intellectual richness. Sanskrit's complex phonetics, Tamil's ancient literature, Kannada's sophisticated script — these are marvels. But does complexity make a language 'better'? Hindi and English, with their simpler structure and widespread usage, thrive the way Sanskrit and Latin no longer do. Modernised Hindi or Bengali shed unnecessary burdens, and expanded beyond rigidity. Tamil evolved across centuries, shaping its practicality alongside its sophistication. Languages survive not because of their ancestry but because of their adaptability. The non-'shudh' English in which this column is being read should be small proof of that.

Fudging Facts, It Just Got Academic



Atanu Biswas

While Harvard is making headlines for its battle with 'Trump University' to effectively emerge as America's de facto opposition party, the Ivy League college has made news for another reason. It recently stripped behavioural scientist and till recently Harvard Business School professor Francesca Gino of her tenure. The charge: fabricating research data. The irony of ironies being that her research topic was 'Honesty and ethical behaviour'.

It all began with the blog, 'Data Colada', an academic research watchdog since 2013 that carefully reanalyses published data to identify irregularities or potential fraud. Data Colada released claims in 2021 of extensive evidence of alleged fraud in four scholarly articles that Gino had co-authored.

The blog had expressed their worries to HBS four years ago, adding that none of Gino's co-authors were involved in fraud. After concluding that the 47-year-old academic had committed 'research misconduct intentionally, knowingly or recklessly', Harvard initiated an internal inquiry placing her on unpaid ad-

ministrative leave in 2023.

While examining version control in Microsoft Excel, it appeared that different rows inside a spreadsheet had been altered. According to experts, data before the suspected manipulation didn't reveal the effect the researchers wanted to observe. But data *after* the purported modification did seem to indicate it.

Also, participants were asked to complete insurance and tax forms in a study. It was discovered that people who were asked to sign declarations of truthfulness at the top of the page were more truthful than people who were asked to sign statements at the bottom.

Gino, however, sued the university and her accusers for \$25 mn, alleging defamation, gender discrimination and invasion of privacy. She claimed the accusations damaged her reputation. But last September, a federal judge in Boston rejected her defamation lawsuit, stating that, as a public

figure, she was subject to scrutiny protected by the First Amendment. Since the American Association of University Professors (AAUP) established regulations regarding firings in the 1940s, Gino has now become the first Harvard professor to lose tenure.

This is hardly the first instance of academic misconduct involving data. A scandal involving Harvard Medical School's John Darsee shook the academic world in the 1990s. Darsee had published a significant number of papers in prestigious journals. However, by May 1981, his colleagues accused him of systematic and frequent fabrication. Investigators claimed that Darsee had presented data from experiments that were never conducted, and had 'expanded' other data to produce more significant results. Eventually he had more than 80 papers removed from the literature. He was relieved of his posts at Harvard Medical School and Brigham and Women's Hospital.

Academic data manipulation is likely to be rampant today. An average of 2% of scientists admitted at least one instance of fabricating, falsifying or altering data, according to a 2009 paper published in PLoS One, 'How Many Scientists Fabricate and Falsify Research? A Systematic Review and Meta-Analysis of Survey Data'.

Gino's — and Harvard's action against her — is a landmark case that could well serve as a model for how other academic institutions respond to allegations of academic dishonesty. On the flip side, excessively stringent enforcement could stifle creativity and run the risk of drawing unfavourable attention to organisations, thereby disincanting them from taking action against unethical faculty members.

Why is Gino's case, in particular, receiving so much public attention? She was one of Harvard's highest-paid professors, earning over \$1 mn in 2018 and 2019. So, is it because the scam involves a star academic? Or is it due to the nature of the accusation — data manipulation? Does it have to do with data sanctity, integrity, dependability and trustworthiness? Does society care so much about data integrity? Apparently not.

Falsifying data evidence is nothing new to people in other professions. However, very few of them have jobs taken away from them for falsifying. The academic community has certainly become stricter about research misconduct involving data, and Gino was undoubtedly punished because academicians are subject to more stringent codes of conduct and constant scrutiny from peers than in other professions. In a sense, a watchdog got bit by watchdogs.



'But do you have to be ethical to know ethics?'

The writer is professor of statistics, Indian Statistical Institute, Kolkata



PHILIPP ACKERMANN

Our open society's offer

Germany's universities and research ecosystem have – and want – Indian talent

FROM A GERMAN point of view, the Indian diaspora seems to have a magic formula for success. They climb to the highest ranks around the world, particularly in Europe and North America. They succeed in the economy, in education, and in research. What do they bring to the table? A culture where education and learning are highly regarded, where grit and determination are a necessity, and where being adaptable and nifty is a way of life.

What is it that we offer? An open society, an internationalised economy and education landscape, and a framework where hard work and skill are rewarded. When smart and well-educated Indians plan parts of their career outside India, they usually think of the English-speaking world first. But I think that the smartest Indians should actually start thinking about Germany. Why? Let me give you a few reasons.

Germany is built on a tradition of science and education. Compulsory education was a German invention, and the modern university was shaped in 19th-century Germany. German scientists dominated the Nobel Prize during the first 50 years of its existence. For the longest time, the tiny university town of Göttingen had the highest

Nobel Prize rate per capita. Almost 50 Nobel Prizes are linked to its university.

The beauty of this story is that it would not have been possible without the minds of those who were also shaped outside of Germany. For excellent science, brilliant ideas need to travel freely, and so do brilliant people. Many of our world-famous scientific organisations are built on this principle – be it the Humboldt Foundation, the Max Planck Society, the Helmholtz Institutes, the DFG, or Fraunhofer. Thirty-one researchers of the Max Planck Society have won Nobel Prizes in natural sciences. If you go through the list, you will find a lot of names that do not sound very German. It is an open, internationalised organisation, and that is why it is so strong.

One of the most inspiring stories written by our accessible and welcoming scientific landscape is that of the pharmaceutical company BioNTech. Founded less than 20 years ago, it is now valued at almost \$30 billion. With its groundbreaking mRNA technology, it helped address the global Covid pandemic. Its founders? One was born in Turkey; the other is a second-generation migrant from Turkey. Who knows from which country the founders of the next

BioNTech will come to Germany?

German educational institutions do not select their students and scientists based on economic criteria. We are not looking for the richest minds in the world but for the smartest. You will find that German institutions offer world-class education and research facilities while being very affordable. German science is so accessible because there is a lot of money in it. We are not setting up high economic walls around our research and education institutions. To a large extent, the German education and research ecosystem is financed by taxpayers' money to make it as accessible as possible. Excellent quality, excellent equipment, excellent researchers – all backed by public spending. The private sector adds to this – it opens the way for applied research, for large interdisciplinary teams, and for bringing your ideas to the market. Some German companies have annual research budgets that only a few national research budgets around the world can actually match.

It is no secret anymore that Germany is a very interesting destination for Indian students. There are 50,000 already in Germany. State universities have had excellent experiences with students from India. And up to

18 months after graduation, they can look for a job in Germany. Right now they will find many job offers, particularly in the STEM field. Germany, an engineering nation, is offering a lot of opportunities.

There is, of course, the question of the language barrier. Be assured, English is the language of science – and Germany is no exception to this. If you want to buy freshly baked bread rolls on your way to your lab, you might have to master the intricacies of the German language. But if you want to run one of the state-of-the-art particle accelerators in Germany or crack the riddles of quantum physics in one of our beautiful university towns, English will do the trick. We believe that we should select international students based on their talents and their dedication, and not based on what they say on social media. Of course, you will have to prove that you are smart, ambitious, dedicated, and industrious – that is important for us. Indians have an excellent reputation in our science landscape – and we want to invite more brilliant Indians to come to Germany. You are very willkommen!

The writer is Germany's Ambassador to India

CUET, a barricade

To restore their national character and order in their functioning, central universities need to recover their autonomous practices



ABHA DEV HABIB AND
SANKAT GHOSH

A FEW YEARS ago, summers at Delhi University (DU) would witness a festive clamour of students and parents visiting colleges to check out the infrastructure, meet faculty members, and submit their applications for admission to undergraduate courses. The demand was such that in many popular courses, despite the soaring cut-offs, admissions would close with the first list.

How things have changed. Now it takes multiple "mop-up" rounds to complete admissions and the process goes on months after the start of classes. An RTI response shows that on average, 5,000 seats have remained vacant in every admission year since the introduction of the Common University Entrance Test (CUET) in 2022.

Admissions to undergraduate courses offered by central universities (CUs) through CUET were first announced in March 2022 while Class XII students were still struggling with Covid. Invoking the National Education Policy 2020, an overnight change in the admission policy was pushed despite educators having forewarned that CUET would downgrade the importance of Class XII board exams while encouraging a mushrooming of the private coaching industry and proxy schools. The CBSE-based CUET also disregarded the importance of state boards and the federal character.

Three years since, has CUET meant anything besides "mop-up" rounds for DU?

A few days back, the National Testing Agency (NTA) declared that it would start the CUET-UG 2025 exams from May 13 rather than May 8. Lack of preparedness was reportedly the reason.

Delays and ineptitude have consistently been part of the CUET-UG story, throwing teaching-learning processes out of gear. DU's perpetually staggered academic calendar is testimony to this chaos, while the inordinate hold-ups in its UG admissions are the principal reason behind seats remaining vacant. Uncertainties have pushed many students to prefer private universities. Seats in several courses remain vacant despite multiple rounds of admissions including embarrassing "mop-up" rounds based on Class XII scores.

Science streams, which have to compete with medicine, engineering and other technical courses, are the most affected. Even slight delays precipitate anxiety in students and parents and indeed, convince them about the futility of taking admissions if students want to reappear for JEE and NEET.

In a knee-jerk response to this issue, the university declared that all courses across colleges would take 20 per cent extra students. While this scheme failed to address the real problem, it resulted in over-admission in some disciplines across certain colleges, thereby slowing the normative student-teacher ratio.

Delayed admissions also mean that the university is forced to function with a different academic calendar for the freshly admitted batch of students as classes in other semesters begin even as the admission process is held to ransom by the CUET results.

Staggered calendars have increased the stress on the system. Universities are designed to operate well within synchronised teaching-examination calendars for all years of students. A large system like DU shifts gears from teaching to examinations, dedicating its resources to one activity at a time.

Staggered calendars result in administrative chaos and cause further delays. When senior batches are appearing for their end-semester exams, the first-year classes are still going on. Teachers are expected to combine teaching with invigilation and evaluation duties. Timetables are disrupted, allotted classrooms are taken up for the conduct of examinations and some colleges even shift their classes online. The results of all batches are delayed as teachers are unable to travel to central evaluation facilities from their respective colleges, where teaching and invigilation take up all their duty hours.

Beyond classrooms, co-curricular activities and student societies have been adversely affected as students of various years are in different phases of their studies and are unable to interact much. Caught in examinations for one batch or the other, colleges find it difficult to schedule their cultural fests.

Post-CUET, admissions to DU have reported an alarming decline in the regional diversity of students and an even more steep fall in the relative number of female students. Conventionally, DU admissions based on Class XII scores assumed a parity between marks awarded by various state and central boards, thereby enabling students from far-flung states and regions of India to seek admission. A student's journey from a small village to Delhi would start once she scored well.

The CBSE-centric CUET insidiously favours only a privileged section of aspirants. Others are expected to spend on private coaching to be on par with students from CBSE schools. Inadequate test centres, frequent paper leaks, lack of evenly laid-out digital infrastructure and the myopic switch to a purely computer-based test have destroyed many dreams of students who are from the hinterland or economically distressed communities. The rising cost of admissions and the attendant uncertainties have also discouraged parents from encouraging girls from remote areas to apply.

Admissions to central universities through CUET-UG are a case of over-centralisation. While top private universities continue to run their admissions-related processes and schedules independent of NTA functioning, the hands of public-funded CUs are tied. In the case of DU, which offers close to 79,000 seats out of a total of 1.5 lakh seats available across CUs, this means an adverse impact on admissions and the teaching-examination cycle. For DU colleges and many other, newer central universities that cater to local populations, CUET is an unnecessary barricade that has demotivated students.

Paper leaks and delays have put an indelible question mark on the NTA's credibility. It is important to review CUET-UG-based admissions. To restore their national character and a modicum of order in their functioning, CUs need to recover their autonomous practices, including admissions. The normalisation of Class XII board results is a possible solution to the problem of disparate marking across boards.

Habib is associate professor, Physics Department, Miranda House and Ghosh is assistant professor, English Department, St. John's College.

It is all in the mind

DEVI KAR

My column today will not make for pleasant reading as it is about the widespread incidence of mental health illness among children. This 'epidemic' was called a silent emergency as early as 2019 by the then executive director of UNICEF, Henrietta Fore. The alarming statistics presented by UNICEF and the World Health Organization reveal the urgency of making the mental health of our children our topmost priority. We must remind ourselves that in order to educate students, a school has to ensure their well-being, both of body and mind.

Never mind the startling global statistics, we can see how many cases of poor mental health schools in our city are having to handle. The demand for counsellors and special educators has gone up exponentially. The multiple learning difficulties that children are demonstrating these days are often rooted in deep psychological causes. Children fall prey to factors ranging from dysfunctional homes and unrealistic expectations to peer and societal pressures. Children start displaying all kinds of symptoms, including 'learned helplessness', which means that if they are perceived as 'incapable' there would be no expectations from them and they would be left alone.

It is unquestionably accepted that both teacher and child must have a happy disposition for teaching and learning to be effective. The challenge is to find ways to keep our children happy and cheerful in today's dark, dismal and violent world where each country is becoming insular and tolerance levels are plunging dangerously. If adults keep talking and worrying about the manifold problems besetting them, it is bound to rub off on children. So the onus is on adults to attempt to be cheerful and optimistic — that too will rub off on them.

It is not difficult to present a happy front to schoolchildren as their very presence can be therapeutic for adults. I know that we educators have a naturally happy workplace. To keep it thus, we must consciously leave our worries

behind and interact with children of all ages cheerfully and positively. Of late, we have been mostly focusing on anxiety with regard to performance in school and good examination scores but now we have to deal with the general gloom that has taken over the world. We must encourage children to find joy in simple pleasures that are not based on personal achievements. Children's activities now are mostly competitive or geared towards the purposeful acquisition of skills. I need not even mention the soul-killing addiction to electronic devices. Surprisingly, simple indoor games like carrom, ludo, snakes and ladders, trivia games or Monopoly can be entertaining and also lighten one's mood. Solving puzzles such as sudoku, crosswords, and jigsaws can be therapeutic while enhancing skills.

Schools must keep their antennae up for signs of mental distress among teachers as well. It is imperative for teachers to be mentally strong and maintain equanimity if they wish to be successful in their work. Some years ago, students would have a lot of innocent fun at the expense of teachers who were moody or temperamentally mercurial or just plain grumpy by nature, imagining situations — say the teacher having a quarrel with her spouse or mother-in-law — which were causing the teacher to take her anger out on them. While appointing faculty, it is wise to look out for pleasant personalities — paper qualifications are just not enough. The school, on its part, has a duty to provide a supportive work environment for all its employees. This would involve counselling facilities for them, a reasonable workload and appropriate amenities. These measures, along with sustained pastoral care of children, should ensure a happy school. Fortunately, physical health is generally taken care of but the time has come to give mental health equal, urgent and immediate attention.

Increasingly, I realise the wisdom of Carl Jung's belief that it is better to be less of a genius and more of a human. We must move from being abnormally focused on high performance and pay more attention to the development of happy, self-confident, well-rounded children.

Devi Kar is director, Modern High School for Girls, Calcutta

7/5/19

Future of learning in Northeast

MAMTA SAIKIA

A bold educational shift in the region is fusing tradition with technology to empower a generation for tomorrow's world.

In a classroom in Guwahati, students met an AI teacher last year – draped in a traditional *sakkala-chador* – who could explain science concepts and answer questions across subjects with ease.

Innovative, mobile-based apps for students and teachers are now being introduced, reaching even the most remote villages. In one such village, a student from a modest background in Meghalaya recently qualified for ISRO's prestigious YUVIKA programme, overcoming digital barriers with the support of timely mentorship and access to technology.

The presence and impact of technology are increasingly visible in schools across India. With EdTech innovations gaining momentum and AI taking centre stage, education in the country is on the cusp of a significant transformation. These developments show what's possible when technology is thoughtfully used to bring learning closer to students, even in the toughest environments.

As the nature of work continues to evolve globally, education must keep pace. The World Economic Forum estimates that nearly 44% of current workforce skills may be disrupted by 2025 due to automation and AI. For many young people in the Northeast – often first-generation learn-

ers – this transition holds immense potential. Building strong foundational learning remains the cornerstone, but alongside it, students also need exposure to digital thinking, adaptability and skills such as problem-solving, coding, and creative thinking.

Many Northeastern States have begun to align their education ecosystems with this changing landscape. Assam's secondary schools are introducing AI and robotics as electives. Meghalaya is integrating emerging technologies into classrooms and leveraging innovative platforms like Vidya Samiksha Kendra to track student progress and enhance learning outcomes. Atal Tinkering Labs across Mizoram, Tripura, and Arunachal Pradesh are enabling students to explore real-world problems through hands-on solutions.

These developments are early signals – of a region steadily moving toward change. In Northeast India, there is a growing recognition that education must not only keep pace with the world but also help shape what comes next. The integration of technology must become more responsive to local contexts, academic goals, and student needs. While progress may vary across districts and communities, the shared aspiration is clear: to make learning more interactive, experiential, and future-ready.

Teachers will remain central to this transi-

formation. The real impact of digital tools depends not on technology alone, but on how meaningfully they are embedded into everyday teaching. Many educators are beginning to explore this space – joining training programmes, experimenting with new methods, and reimagining their classrooms as blended learning environments. What's needed now is continued support – spaces where teachers can exchange ideas, share what works, and build collective momentum.

This shift must also connect with students and their contexts. In a region where knowledge is deeply rooted in Nature, community, and tradition, the challenge – or rather, opportunity – is to make digital learning relevant to their lives. From mapping local biodiversity to preserving traditional crafts or understanding sustainable farming, when students connect technology with their lived experiences, learning becomes not just effective but truly meaningful.

Families and communities, too, must be brought into this journey. For many parents, the benefits of digital learning are still abstract. But when they begin to see how these changes can open new pathways – towards higher education, employment, or entrepreneurship – their support can become a powerful force. Building this trust

will require ongoing dialogue, clear demonstrations of value, and deep cultural sensitivity. Digital learning should not feel like a break from tradition, but a natural extension of community aspirations.

To truly move forward, collaboration will be key. Government policy, school leadership, teacher agency, student curiosity – each must come together. Partnerships that understand and reflect the region's goals and cultural ethos are more likely to succeed and endure.

Northeast India stands at a pivotal moment. With its unique blend of cultural wisdom and emerging innovation, it has the potential to create an educational model that inspires the rest of the country. But this vision will require effort, investment, and imagination. When a girl in Nagaland begins learning to analyse rainfall patterns with AI, or a boy in Arunachal Pradesh dreams of building a solar-powered device, it should not be an exception – it should be the future we are collectively working towards.

Because what's taking shape here isn't just about keeping up with a changing world – it's about helping shape it. And that future deserves attention, nurturing, and belief.

(The author is CEO of Bharti Airtel Foundation) ४९६६

Even before the US threatened to bar international students and besieged universities, China's huge spending campaign on the sciences was bearing fruit

VIVIAN WANG

China was already scoring wins in its rivalry with the United States for scientific talent. It had drawn some of the world's best researchers to its campuses, people decorated with Nobel Prizes, MacArthur "Genius" grants and seemingly every other academic laurel on offer.

Now the Trump administration's policies might soon bolster China's efforts.

Under President Donald Trump, the United States is slashing the research funding that helped establish its reputation as the global leader in science and technology. The president is also attacking the country's premier universities, and trying to limit the enrolment of international students.

Scientists from China are under particular pressure, as US officials have said that they may pose a national security threat by funneling valuable knowledge to China. Chinese-born scientists have been investigated or even arrested. Last week, the Trump administration said it would work to "aggressively revoke" the visas of Chinese students in "critical fields."

As a result, many scholars are looking elsewhere.

And Chinese institutions have been quick to try to capitalise. Universities in Hong Kong and Xi'an said they would offer streamlined admission to transfer students from Harvard University. An ad from a group with links to the Chinese Academy of Sciences welcomed "talents who have been dismissed by the USNDH" or National Institutes of Health.

"The United States is shooting itself in the foot," said Zhang Xiaoming, an anatomy expert who last year left the Baylor College of Medicine, in Texas, to lead the medical education program at Westlake University, a research university in the tech hub of Hangzhou.

"Since I went to the United States more than 30 years ago, so much of its research has been supported by foreigners, including many Chinese," said Zhang, who emphasised that he was speaking for himself, not his employer. "Without foreigners, at least in the field of scientific research, they can't go on." On its own, China had become more attractive to scientists in recent years because of the huge investments the country has made in research. Westlake is a prime example.

Established in 2018 by several high-profile scientists who had returned to China from the West, Westlake's campus exudes technological advancement. A spaceship-like tower looms over rows of research laboratories. Computing centres and animal testing facilities cluster around a central lawn, in a shape designed to evoke a biological cell.

In its main academic building, portraits of dozens of professors are on display—all of whom were recruited from overseas. There is Guan Kunliang, a biochemist who won a MacArthur "Genius" grant while in Michigan; Cheng Jianjun, a materials engineer honoured multiple times by the National Science Foundation; Yu Hongtao, a Harvard-educated cell biologist who received millions in funding from the Howard Hughes Medical Institute in Maryland.

Recruitment notices advertise high compensation, in line with those at top foreign universities.

Westlake has been perhaps the most successful Chinese university at recruit-



ILLUSTRATION: DEEPAK HARSHANAND

China really wants to attract scientists. Trump just helped

ing overseas talent, but it is far from the only one. Between 2010 and 2021, nearly 12,500 scientists of Chinese descent left the United States for China, according to a study published in *Proceedings of the National Academy of Sciences*. The rate of departure was accelerating: More than half of them left in just the five years between 2017 and 2021.

The trend has only continued in the past few years, said Yu Xie, a professor at Princeton University who co-authored the study. Nor is it only Chinese-born scientists who are jumping ship. Charles Lieber, a former Harvard chemist who was convicted in 2023 of failing to disclose payments from a Chinese university, recently joined Tsinghua University.

Chinese scientists have long flocked to American universities, lured by the promise of a world-class education and resources that their home country could not provide. In the 1980s, Chinese scientists who visited the United States would collect disposable test tubes to reuse in China, said Rao Yi, a neurobiologist at Peking University in Beijing, who studied and worked in the United States for two decades.

The admiration continued even as China's economy boomed. In 2020, nearly one-fifth of doctorates in science, technology, engineering and mathematics awarded in the United States went to students from China, according to data from the National Science Foundation. Historically, the vast majority of those doctorates stayed in the United States—87% between 2005 and 2018, the data showed. Many became US citizens, and they have helped the US accumulate patents, publications and Nobel Prizes.

In recent years, more scientists have been returning to China, drawn partly by government recruitment programs promising them millions of dollars in funding as well as housing subsidies and other perks. China's spending on research and development is now second only to the United States. And Chinese institutions such as Tsinghua and Zhejiang University now routinely rank among the best in the world for science and technology.

The investment is part of a plan to turn China into a scientific superpower, especially in strategically important fields such as artificial intelligence, semiconductors and biotechnology.

"The scientific and technological revolution is intertwined with the game between superpowers," China's leader, Xi Jinping, said last year.

At the same time, the US has been pushing scientists away for years, in particular by investigating their ties with China.

Lu Wuyuan, a protein chemist formerly at the University of Maryland, was one of those targeted. He was investigated by the National Institutes of Health for allegedly failing to disclose research ties to China—ties he said Maryland knew about. After 20 years at the university, he quit in 2020.

Most of the cases brought under the so-called China Initiative eventually collapsed. Many researchers criticised the campaign as racial profiling.

Lu, who now works at Peking University in Shanghai, said that many of his friends mused about leaving the United States, but most chose to stay because they had settled there.

The Trump administration's assault on research funding may change that.

"If they cut so much funding, I believe

that may be the last straw for many people," Lu said. Still, China faces its own issues in poaching talent.

It has become harder for Chinese universities to meet and woo overseas scientists, as Chinese scholars have had trouble securing visas to the United States to attend academic conferences. Researchers in America also face restrictions in visiting China: Texas, for example, prohibits employees of public universities from traveling to China for work.

The scientists who have returned to China largely fall into a few categories: those who are early in their careers, or who are nearing retirement, or who felt pushed out by investigations. Established midcareer scholars are still reluctant to leave, multiple scientists said.

Rao at Peking University, who was also one of Westlake's co-founders, said that China's progress in recruiting international talent had also been hampered by cronyism and jealousy among domestic colleagues. "While funding should increase, it is not the key factor at this stage," Rao said. "Supporting scientists based on merit and their good science is the key."

Even at home, scientists are not spared political scrutiny. Chinese universities face limits on free expression, and China's Ministry of State Security has warned that scholars returning from overseas may be spies.

Multiple Chinese-born scientists—both those who had returned to China, and those still in the US—emphasised that they did not want to get entangled in politics. They were just trying to do good work.

The simple fact was, many agreed, that it was increasingly easier to do so in China.

The New York Times

What King Donald, like Henry VIII, shows us is that narrative power can beat institutional power

America's Henry vs Harvard



Arnie Guha

Toronto: In 1530, when Henry VIII couldn't get the Roman Catholic Church to annul his marriage to Catherine of Aragon, he turned to Oxford and Cambridge Universities to rubber-stamp his theological needs. Oxford baulked. Henry sent envoys. Scholars were threatened, bribed, and some physically intimidated. Eventually, the university capitulated, issuing a carefully hedged opinion that Henry used to justify what he would soon call the Church of England. It was one of the first great acts of coercive PR.

Henry didn't abolish Oxford. He appropriated it. And he did so with all the pageantry of a man who knew power needed not just to be enacted, but also performed.

Fast forward 500 years. A different kind of sovereign, wearing a long red tie and clutching grievance like a royal orb, has made a sport of attacking America's modern Oxfords. For Donald Trump, Harvard isn't just an Ivy League school. It's the synecdoche for everything that's rigged, elitist and dangerously convinced of its own neutrality.

On Wednesday, Trump issued a proclamation suspending, for an initial six months, entry of foreign students seeking to study or participate in exchange programmes at Harvard, citing 'national security' concerns and declaring it 'detrimental' to US interests to continue allowing foreign students at the institution. This comes after a judge blocked the US Department of Homeland Security (DHS) from banning international students at Harvard in a ruling late last month.

Harvard says it studies the world. Trump says it controls it. These two men — Henry and Donald — separated by centuries and context, share something deeper than vanity and theatrics. They each stage a revolution of legitimacy. Henry rejected the spiritual authority of the pope. Trump rejects the moral and intellectual authority of institutions like Harvard, Centers for



He is a man of an unbounded stomach

Disease Control and Prevention (CDC), the media. In both cases, the challenge is not about truth. It's about whose truth, and who gets to decide.

When Henry declared himself supreme head of the Church of England, it was an act of theological violence. But it was also a bureaucratic masterstroke. He didn't need Oxford to agree in good faith. He just needed it to appear to agree. When Trump demanded loyalty from his cabinet, his party, even the judiciary, the playbook was oddly similar. The point wasn't consensus. It was submission. And universities, in both eras, became reluctant stages.

Oxford during the Reformation was a religious university. Its scholars were clerics. Its curriculum was bound to Rome. When Henry's men arrived with their writs and threats, they weren't just asking for a legal opinion — they were demanding a confession of allegiance. The consequence of

refusal wasn't academic censure; it was ruin. You could be exiled, defunded or worse.

Trump can't jail tenured professors. But he doesn't have to. In the populist theatre he presides over, simply calling Harvard 'woke' or 'corrupt' is enough to delegitimise generations of intellectual authority. Once a symbol of merit, Harvard becomes a symbol of manipulation. Once a beacon, it becomes a cabal.

It's not that Harvard has always been innocent. The meritocracy it presides over is partial, exclusionary and, at times, deeply complicit in structural injustice. But Trump doesn't critique Harvard's failures to live up to its ideals. He denies the value of the ideals themselves: truth, inquiry, deliberation. Like Henry, he wants obedience, not contradiction.

There's a cruel irony here. Henry VIII actually founded — or re-founded — more universities than most Eng-

lish monarchs. He created Trinity College, Cambridge, and repurposed Thomas Wolsey's Cardinal College into Christ Church, Oxford. But these were not acts of philanthropy. They were acts of branding. He was placing his seal not only on the institutions but on what kind of thought they were allowed to produce.

Trump, too, has flirted with founding his own institutions. Trump University was a scam. His supporters now talk about 'alternative academies' and 'anti-woke' colleges as sanctuaries for 'real' knowledge. The language is different but the logic is the same: if the institutions don't validate me, I'll build new ones that will.

And here's that strange, eternal thing: in both Henry's time and our own, these tactics work.

After Henry, England never returned to papal authority. His church — blunt, politically expedient, theologically patchy — endured. It became tradition. In a similar vein, Trump's antagonism toward the academy is not a passing phase. It has seeded a cultural rejection of expertise, a suspicion of intellectuals, a preference for instinct over analysis. And it's not going away.

What should universities do in the face of such assaults?

Oxford survived Henry by adapting, accommodating and, in some cases, capitulating. The danger today is that universities like Harvard might do the same: water down their mission in the name of neutrality, shy away from hard truths to avoid political attack, or rebrand themselves into obsolescence.

But the alternative isn't easy either. To speak truth clearly, even when it's unpopular, requires not just institutional will but moral courage, a quality rarely taught in seminars or strategic plans. What Trump has shown us — and what Henry knew centuries ago — is that narrative power can beat institutional power. And if the university loses the confidence to defend its narrative, its gates will not be stormed. They will be laughed at. Or ignored.

The future of American higher education won't be decided by who builds the better lab. It will be decided by who tells the better story about what knowledge is for. And who gets to wield it.

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CTC

For Trump, Harvard isn't just an Ivy League school. It's the synecdoche for everything that's rigged, elitist and dangerously convinced of its own neutrality



The university versus constitutionally protected speech

“Give me the liberty to know, to utter, and to argue freely according to conscience, above all liberties,” said John Milton in his famous pamphlet, *Areopagitica* (1644), opposing the licensing system (called *imprimatur*). Originally introduced in response to the introduction of the printing press in England in 1538 and reinstituted by the British Parliament in 1643, authors had to obtain permission or licence from the government prior to their publications. In India, several High Courts and even the Supreme Court of India are hearing petitions on the limits of freedom of expression. Should we really go back to that dated system where prior permission of the government or university is required to express one's views? Are university teachers mere robots who should write only research papers and not express their opinions on contemporary issues? Do we no longer consider free speech to be an integral part of human dignity and an individual's self-fulfilment? Is truth no more autonomous and the highest public good? Are not excessive restrictions on free speech based on the assumption of infallibility of the state or its stated positions? These are some of the pertinent issues that India must resolve because its position on these fundamental issues is bound to strengthen or weaken its ethical claim of being a true *Vishwaguru*. India's low rank of 151 out of 180 in the World Press Freedom Index does not enhance its stature in the comity of nations.

No doubt, 'nation first' should be the rule of thumb for all of us because no debate can survive if the nation itself perishes. We must be united in our fight against an enemy that has time and again been sponsoring and exporting terror to our country. A prompt and befitting response during Operation Sindoor has been given to the enemy nation.

The labelling of opinion as activism

We must now return to the realm of constitutional vision as we need to win the battle of ideas as well. Of course, every writer has the duty to make a disclaimer that his views are personal and do not represent the views of the institution he serves. But then a mere expression of views cannot be termed by the corporate owners of the universities or vice-chancellors as 'activism'. An expression of opinion may be dissent but not necessarily activism. Public academic institutions do not mind even activism and active politics. A professor became the national president of the Bharatiya Janata Party (1991-93).

Certainly, no writer should expect any institutional support for his personal views. No court should ideally shy away from its duty of safeguarding constitutionally 'protected speech'. It must remain consistent with its own past pro-freedom of speech judgments. The U.S. Supreme Court, in *Texas vs Johnson*, 491 U.S. 397 (1989), had even considered burning of the national flag as a protected expression. India



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need not go that far. John Stuart Mill, in his celebrated essay on liberty, said that "If all mankind minus one, were of one opinion, and only one person were of the contrary opinion, mankind would be no more justified in silencing that one person, than he, if he had the power, would be justified in silencing mankind". British jurist William Blackstone in 1769 considered a free press as essential for a free state. Though the 1787 U.S. Constitution did not include freedom of the press as a right (because Roger Sherman had said in the Constitution Convention that adopted the U.S. Constitution, that there was no need to mention freedom of press as the powers of the Congress would not extend to press yet within four years), the First Amendment in 1791 on freedom of press made a categorical and explicit declaration that the "Congress shall make no law... abridging the freedom of speech, or of the press...."

Democracy is government by choice and people cannot exercise their choices if they are not told about all the available alternatives. Let alternative views be expressed and protected. Moreover, freedom of speech assures individual self-fulfilment. If a citizen is not allowed to express his emotions, his opinions, his frustration, and his happiness he will not feel self-fulfilled. University owners must understand that such suffocated individuals cannot produce scholarly research as knowledge cannot be created in a controlled environment. We produced greats such as Aryabhata, Chanakya, Gargi Vachaknavi and Charaka because the education in our ancient *gurukul* was not controlled by the state. Within the portals of universities, all kinds of ideas, which include repulsive ones, must be expressed. Today, our universities are over regulated and grossly underfunded.

Expression and the truth

Freedom of expression helps us in attaining the truth. It was Milton who said, "Though all winds of doctrine were let loose to play upon the earth, so truth be in the field, we do injuriously by licensing and prohibiting to misdoubt her strength. Let her and falsehood grapple, who ever knew truth put to the worse, in a free and open encounter". In an age of fake news, let everyone speak so that people can decide for themselves who is speaking the truth. Justice Oliver Wendell Holmes Jr. of the United States rightly observed that in a capitalist market place, the "best test of truth is the power of thought to get itself accepted in the competition of market". Thus, an expression of all views would basically serve the government's cause in fencing off people from what is false.

This is nobody's case that freedom of speech is an absolute right. Indeed, no one should indulge in unnecessary talk. The exercise of right must be aimed to serve the constitutional objects of free speech, i.e., the search for truth and helping people in forming opinions about governmental actions and thereby ensuring sovereign people's

participation in the governance.

The extent of restrictions

The Constitution permits only 'reasonable restrictions' on the freedom of speech and expression. The all-important word 'reasonable' was inserted by the first constitutional Amendment in 1951. These restrictions can be in the interests of sovereignty and the integrity of India, security of state, public order, decency, morality, friendly relations with foreign countries, and defamation or incitement of an offence. 'Public order and friendly relations with foreign states' too were inserted in 1951. Interestingly, restrictions in the interests of 'sovereignty and integrity' were inserted by the Constitution (Sixteenth Amendment) Act, 1963.

No restriction on freedom of speech can be imposed even by the government through an executive order. Restriction on free speech requires legislation. To satisfy the test of 'reasonableness', courts invoke the 'doctrine of proportionality'. In *Anuradha Bhasin vs Union Of India* (2020), the Supreme Court not only held the right to Internet as a part of free speech but also reiterated that the restrictions on free speech can be imposed after considering alternative measures. It added that such restrictions must be legitimate, necessary and least intrusive. It is the state which has the burden of proof in establishing that the restriction is proportionate, and thus reasonable.

No institution has any right to restrict anybody's freedom of speech on any ground other than the ones mentioned in Article 19(2). Thus, restrictions cannot be imposed by any institution just because it is a private educational institution or because it is bound by the regulatory control of regulatory bodies. These are lame excuses that do not have a leg to stand on.

The Supreme Court, in *Dr. Jyoti Bapat vs S.R.M. University and Anr.* (2015), had held private universities as 'state' because they too discharge 'public functions' and thus, any arbitrary dictate by them would be hit by Article 14, i.e., the right to equality which includes the right against arbitrariness.

Returning to the issue of an author/writer facing the consequences, the law is crystal clear - if his speech is not protected by the Constitution, no one can or should defend him. But when the speech is well within constitutional limits, ideally, the institution should not disown him as it would not only demotivate the faculty but also result in a situation where such an institution would not be able to attract outstanding scholars. A student is the real conscience keeper of a university. Private educational entrepreneurs must know that the Supreme Court has had the consistent view that education is an occupation and not a business. Let us celebrate a diversity of opinions as in a vibrant democracy, every opinion counts and the university truly signifies a universe of knowledge.

CUET revolution: Schools as pathways to higher education

The Common University Entrance Test (CUET) 2025 concluded earlier this week, with over 13 lakh students taking the test this year. Now in its fourth year, CUET is India's second-largest undergraduate entrance exam after the National Eligibility cum Entrance Test (NEET), with over 280 universities relying on it for admissions. If managed well, CUET could be India's gateway to realising the Viksit Bharat vision.

India's vision for Viksit Bharat 2047 is built on a bold promise: A future where young minds drive economic growth, powered by an education that will create real skills and jobs. With over 65% of the population under the age of 35, the stakes are immense in education. A key milestone on this path is raising the Gross Enrolment Ratio (GER) in higher education from the present 28.4% to at least 50% by 2035, while ensuring that more graduates are not just degree-holders but job-ready for a rapidly evolving world.

For Viksit Bharat to succeed, India needs a workforce equipped with future-ready skills and not just degrees. But with GER stuck at its current level, millions are still missing out on higher education, leading to employability challenges. The solution starts with better access, and that is where CUET plays an important role. Over the last two decades, India has largely solved the issue of access to school education. Now is the time to do the same for higher education and build a workforce that is employable at scale.

CUET is reshaping college admissions, making them fairer and more accessible. It plays a crucial role in helping India achieve its goal of a 50% GER. However, for this to be successful, schools must look beyond board exams and recognise CUET as one of their core responsibilities, along with quality education, career readiness, better affordability, and robust infrastructure.

But are our schools ready to go beyond their traditional role of preparing students for board exams? For decades, Indian schools have been board-centric, leaving students to depend on coaching centres for entrance exams. CUET, a National Council of Educational Research and Training (NCERT)-aligned entrance exam available in 13 languages, can change that. It levels the playing field, giving a student from a remote town the same shot at, say, Delhi University, as a student from the Capital. This kind of accessibility naturally encourages more stu-

dents to pursue higher education. Of course, increasing the GER also depends on the quality of higher education institutions and the job prospects they offer. But in a country like India, sometimes, demand needs to be created first to expose the gaps in supply and catalyse at-scale changes. India's future cannot rest on a handful of students making it to top engineering and medical colleges.

Globally, tests like the US's Scholastic Aptitude Test (SAT) for university admissions have long simplified the process while expanding access, helping skilled talent to flow into economies.

However, CUET must not get reduced to another coaching-driven hurdle like the Joint Entrance Examination (JEE) or the NEET, losing its essence of fairness and inclusivity. Schools can prevent this by weaving CUET preparation into their mission. With the National Testing Agency (NTA) confirming that the syllabus for CUET 2025 will align with the NCERT's Class 12 framework, board and CUET preparation can merge seamlessly in the school. This is an opportunity to align education with students' career aspirations, not just mere exam scores.

Imagine a school where teachers are focusing not only on the board results but also on CUET scores and undergraduate course enrollment. Compare this with some of the countries, where teachers see career guidance and higher education discovery as their core duty. They don't just teach, they mentor students towards universities that match their aspirations, helping them prepare for their entrance exams and beyond.

Indian schools could take a leaf out from this book, evolving into comprehensive learning hubs as envisaged by the National Education Policy (NEP) 2020. In a country like India, this step also addresses critical concerns around equity and affordability by eliminating dependency on coaching centres.

Ultimately, this isn't just about exams; it's about equipping youth to lead India's rise, where every classroom fuels a future of innovation, jobs, and prosperity. And schools at the centre of this movement is the most likely way this momentum can be created.



Hemant Joshi



Chaitanya Naik

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Reimagining the classroom



CBSE mother tongue policy should be implemented through dialogue, not diktat

AMEETA MULLA WATTAL

AS OF MAY, the Central Board of Secondary Education has released approximately 30 academic circulars and numerous examination, affiliation and miscellaneous documents. These include assessment guidelines, teacher training programmes, student enrichment activities, curriculum updates and policy implementation. Educators are now grappling with the latest, mandating the implementation of mother tongue-based instruction in the foundational and preparatory stages of schooling.

From the Kothari Commission (1964 to 1966) to the National Policy of Education (1968), the Yashpal Committee (1993), National Curriculum Framework (2005, NCF) along with UNESCO, NCERT and numerous global developmental psychologists and even the National Education Policy (2020) have all highlighted the importance of mother tongue-based learning in foundational years (three-eight years). The NCF 2023 directed schools to make the process more structured and explicit, and align it with global best practices.

Several studies show that children learn best when taught in their home language because it brings emotional security and concept retention. In fact, it has been argued that learning in an unfamiliar language disconnects the child from real-world experiences, reduces classroom participation and often delays understanding. In places where tribal languages or dialects have been set aside, this step can pave the way towards linguistic equity and educational justice. This is an aspirational policy, but the learning ecosystem is fragmented. In order to implement it in letter and spirit, all stakeholders will have to be involved.

Schools can create a language policy after surveying the home languages of their students. With schools mapping language groups and deciding on bridge programmes by allocating resources and teachers accordingly, parents can make an informed choice. In heterogeneous schools, using the mother tongue is not about enforcing one language, it's about embracing linguistic plurality and making children visible. In order to respond through a balanced strategy, parents have to be informed

that both the NEP and the NCF support additive bilingualism with strong foundations in the home language along with systematic learning of English. If the mother tongue is positioned as the foundation and English layered in contextually, it will become a bridge.

Across socio-economic strata, Indian parents see English-medium education from the foundational years as the key to success. For some, mother-tongue instruction feels regressive. There will be an aspirational mismatch because the mindset behind English-medium education has been driven by media, advertising and peer pressure. Teachers will be left to mediate between parental anxiety and policy mandates, without support or community engagement.

Teachers may themselves feel overwhelmed by the push towards mother tongue-based multilingual instruction, especially in heterogeneous English medium schools. Most teachers are trained to teach in English or Hindi, or their regional language and English, not in pedagogical strategies or multilingualism. Handling multiple languages without lesson plans can be difficult for them. Assessment also offers challenges in evaluating learning across languages, especially when tools are monolingual. Teachers are expected to manage language equity, curriculum delivery and concept clarity without training, material, or time. Support, not imposition, is the way forward, if we want multilingualism to become a strength, not a burden.

A teacher may speak the mother tongue fluently but may not be able to explain concepts pedagogically in that language. He or she may lack academic vocabulary or age-appropriate phrases. They may not know how to create learning materials or assess learning in the language. Unless they are trained to teach the language, the instruction will not succeed. Parents, too, need to be made partners in this transition. It is important to give them a roadmap of how children will transition in reading and writing fluently in both their mother tongue and in English.

A greater load has been added without reducing academic responsibilities. Planning for a multilingual class requires more time, in ad-

dition to the regular work that teachers do. If we want children to learn with joy and meaning, then their teachers must be supported with empathy, time and trust. The policy has to be a dialogue, not a diktat.

Mother tongue-based education is a vital tool in addressing the global learning crisis. In order for it to succeed, the CBSE and state education departments must move beyond circulars and compliances to systemic support, or the gap between policy and practice will widen.

Schools should be given a two-to-three-year transition window starting with oral exposure, creating classroom levels for language mapping, developing multilingual lesson plans, differentiated assessments, resource kits and teaching aids. Oral and non-verbal rubrics that measure conceptual understanding need to be created. Experienced multilingual resource persons should conduct workshops for teachers of foundational years because they need to be partners in reform. A common instructional language should be chosen, while the mother tongue can be taught through songs, stories, language activities, traditional games, audio libraries and AI-driven technologies.

Urban schools, especially in metros, are an example of India's internal migration and cultural plurality. Classrooms include children who speak a variety of mother tongues — Malayalam, Bengali, Tamil, Marathi, Kannada and others — within the same learning space. This linguistic landscape calls for context-sensitive handling rather than a one-size-fits-all approach.

The policy has great potential but without clarity in execution, it will become merely symbolic. The benefit of the mother tongue in the foundational years can only be realised with the help of supportive parents and trained teachers, who will design it not merely as a linguistic shift but a reimagining of childhood and learning.

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55/12

Reasoned reservation

Historically, Higher Education, thus, has remained restrictive on the premise of a basic (natural) axiom of inequality in individual intellectual endowment and talent. That is, human beings of high intellectual calibre, ability and academic inclination are born naturally to be fewer in number and are also distributed randomly across an entire cohort of a population, irrespective of class, caste and creed

There was a time – albeit not very long ago – when the term, higher education, (HE), meant chiefly teaching educational programmes at higher (post-secondary) levels in diverse disciplines and academic research conducted in educational institutions such as colleges and universities funded, in large part, by the state for promotion and cultivation of such precious public goods as scientific (original) inventions, new knowledge, new theoretical/analytical discovery and insights into major dimensions of human history, society, arts and culture. Unlike primary or secondary schools which impart universal basic education, the HE arena was historically supposed to be denegated by those who happen to have not only proven intellectual superiority but also an innate thirst for deeper knowledge/truth and its persistent scholarly pursuits.

This is how the HE-system has been, for long, perhaps until the 1970s, a distinguished, sustainable and steady source of overall societal progression and flourish – scientifically, technologically, socially, politically and culturally. However, there has been an unpalatable skewed participation in HE by elite and socio-economically well-off sections of population – a fact which has reflected, for long, a social injustice rooted in the economic and political systems as a breeding-ground of potential inequality in the distribution of income and wealth.

Lately – especially over the post-WWII decades – many concerted criticisms and analyses of this historical inequity in traditional HE have been voiced chiefly from political standpoints and mainly by socio-political activists. However, these campaigns for greater equality in HE in terms of participation of all classes and castes seems often to remain oblivious to the historic fact that it is only the intellectually able and innately academic-minded candidates, and not other members even of the elite and wealthy families, that used to get admission to institutions of higher learning and research.

Although this reflects squarely a top priority that used to be traditionally accorded to the maintenance of intellectual excellence and standards of HE, this should by no means be construed as an alibi for stark social inequality manifest in a disproportionately meagre participation of candidates from socio-economically weaker sections of whom many naturally are born with no less intellectual potential and innately academic inclinations than their counterparts from well-to-do households.

Most of the former group remains deprived of HE, because their households cannot afford to spare even a single adult family member – however academically brilliant and motivated – for higher learning for even a single year without working and contributing to the survival of the family itself. Therefore, there has historically been a provision of scholarships and benevolent support from state or private sources for HE of such potentially outstanding candidates of the underprivileged section. Dr B. R. Ambedkar, one of the finest intellectual stalwarts of India of



the preceding century with superior education and exposure abroad, being one of its glaring illustrations. However, this cannot hide the basic historic fact that many intellectually gifted and academic-minded youth from socio-economically weaker households remain deprived of HE opportunities both because of extreme paucity of scholarships as well as inordinately high opportunity cost for households stymied in abject poverty.

Historically, HE, thus, has remained restrictive on the premise of a basic (natural) axiom of inequality in individual intellectual endowment and talent. That is, human beings of high intellectual calibre, ability and academic inclination are born naturally to be fewer in number

and excellence in HE, unlike in universal school education, is too precious to be compromised under any circumstances – let alone in the name or cause of social equity or justice.

However, of late – especially after WWII – in the wake of neoliberal projects of massification, marketisation and privatisation of HE, the western world has embraced affirmative action to widen participation (read market demand) in HE of youth from underprivileged sections sometimes almost indiscriminately (i.e. irrespective of levels of intellectual ability and academic merit) stipulated officially for admission (via arguably a backdoor of invoking a notion of 'plurality' of students per se in terms of social, cultural, ethnicity, etc.).

which, it is argued, exerts an independent influence towards achieving greater efficacy of HE.

Apart from the fact that this plurality-argument for relaxations, if necessary, in academic eligibility in the admission process has been frowned upon in apex court judgments in most Western nations, the recent research

appears distinctly uncertain and unclear over the extent of realisation or realizability of purported effects of increased diversity via affirmative action on the academic performance of students from disadvantaged groups or the achievement of the goal of social integration and equity in HE campaigns (For evidence on this see my recent monograph *Higher Education and Intellectual Hegemony: The Neoliberal Reign*, New York/London Routledge, 2023).

Indeed, there exists a lingering concern about affirmative action's potentially plausible effects towards lowering overall academic standards of HE. For example, a special adviser to the Education Secretary in UK wrote in 2013: "Although they would not put it like this, most prominent people in the education world tacitly accept that failing to develop the talents of the most able is a price worth paying to be able to pose as defenders of 'equality'."

In this broad global scenario of affirmative action in HE, the Indian line of thinking is unique for its sustained advocacy of a policy of 'reservation/quotas', which is often coupled with relaxations, if necessary, in academic eligibility for admis-

sion of students from constitutionally disadvantaged sections and castes (especially when reserved seats are not filled up by adhering to a common set of stipulated academic criteria for admission to HE institutions). All this, while being heavily instrumental in massive expansion of enrolment from under-represented social categories, together with increased diversity of teaching sources, very often ends up at a point of no return, if not negative returns, at the societal level.

The clue to such outcome is not very far to seek. The admission of pupils from socio-economically weaker sections to HE institutions via both reservation and relaxation of eligibility criteria often has a great potential of diluting overall academic standards of education which in turn frustrates the core philosophy behind HE. This is mainly because of the evidently limited success – or perhaps even failure – of the customarily percolated 'catching-up' effects on the intellectually weak students admitted via reservation. Therefore, this uniquely Indian policy of 'reservation' in admission to HE institutions, when coupled with academic relaxation for admission of academically weaker students from reserved categories, effectively grafts a group with lower academic merit onto a meritorious majority (which comprises of students from all socio-economic categories), and often proves to be misplaced.

This is because of two intertwined reasons. HE – in contrast to elementary/higher secondary education – ideally is not meant to be a major vehicle for achieving the goal of social justice, since social injustice stems from outcomes of a complex interplay of many societal forces such as political economy, history, culture, politics and religion. Secondly, any attempt of grafting a small group of low intellectual calibre, thereby exposing them to a uniform undiluted curriculum and academic standard, has often been a major cause of tremendous tension and stress among students of weak merit, manifesting itself in diverse forms including depression and related mental illnesses culminating sometimes into incidents of suicide on campus.

The universal right to school education or universal adult franchise in elections in a democracy is a notion which is eminently inapplicable in case of HE for the simple reason that it calls for superior intellectual abilities and passionate academic motivations – some distinct (inborn) cognitive resources – which cannot be manufactured or injected. Let this clear and natural datum followed perennially in the sphere of HE not be allowed to be muddled by letting political interests or sentiments interfere with the socially sacrosanct domain of higher learning and research.

Its corollary, of course, is a manifold expansion and liberality in the provision of scholarships and other financial support to the meticulously identified cohort of genuinely meritorious candidates with an innate academic affinity hailing from socio-economically underprivileged and deprived sections of the society and polity. *anand*



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BRIGHT SPOTS

A literacy level of 80.9% is good news for India. The Periodic Labour Force Survey report on literacy shows this percentage for those seven years old and above and 79.7% for those five and above. For the former group, the best performing states are Mizoram, Lakshadweep, Kerala, Tripura and Goa, although the New India Literacy Programme places Goa at the top of the list at over 97%. The report of the Foundational Literacy and Numeracy Assessment Test, which depends on certification, found that Tamil Nadu performed the best with 100%, while Tripura followed closely. That makes Tripura one of the best in the country in both literacy and foundational education. All these states show an awareness of the need for literacy and functional education, suggesting firm policies and the political will to empower the people. In the FLNAT results, Uttarakhand, Gujarat and Himachal Pradesh were the least successful, although even they achieved around 85%. Himachal Pradesh, though, had been one of the earliest states to gain high literacy, but it is not doing so well in foundational knowledge.

But given the size of India's population — over 1.4 billion — 80.9% literacy rate means it still has a long way to go. Besides, there are discrepancies in achievement that indicate socio-economic, gender and regional differences. The PLFS data show that Bihar, Madhya Pradesh and Rajasthan are worst achievers in literacy and the gender literacy gap there is between 16% and 20%. This is a countrywide failure: the national average for men is 87.2% and women's literacy is 74.6%. Girls do well in school, yet clearly a large number of them are not going there or being taught at home. In rural areas, this gap is bigger. In rural Rajasthan, for example, male literacy is 83.6% and women's 61.8%. This argues certain social attitudes that need to change for high levels of development. There is a difference in urban-rural literacy too, the most acute being in Madhya Pradesh, Uttar Pradesh and Bihar. The best-performing states have narrower differences but they do not disappear. In Tripura, though, the gender literacy difference is over 4%, more than the others in its category. The spread of literacy, whether through schools or adult classes, is obviously still not adequate in rural India. But generally, the outlook can be positive; India's literacy rate seems likely to improve.

tel/6/10

शिक्षकों की कमी से जूझते शिक्षा संस्थान

जब हम विश्वगुरु बनने की बात करते हैं, तब शिक्षा संस्थानों की भूमिका की भी चर्चा करते हैं, लेकिन इस समय हमारे दस केंद्रीय विश्वविद्यालय नियमित कुलपतियों की प्रतीक्षा कर रहे हैं। इसमें बीएचयू में छह माह और इग्नू में एक वर्ष से कुलपति के पद खाली हैं। पिछले महीने लगभग एक वर्ष के पश्चात शिक्षा मंत्रालय ने चार केंद्रीय विश्वविद्यालयों—बीबीएयू लखनऊ, ईएफएलयू हैदराबाद, पंडिचेरी और वर्धा हिंदी विश्वविद्यालय में कुलपति नियुक्त किए। विश्वभारती विश्वविद्यालय में कुलपति की नियुक्ति दो साल बाद की गई। राज्य विश्वविद्यालयों में कुलपति के लगभग 30 प्रतिशत पद खाली हैं। नियुक्तियों में देरी से शैक्षणिक और प्रशासनिक, दोनों कार्य बाधित होते हैं। महत्वपूर्ण पदों को अनिश्चितकाल तक रिक्त छोड़ना इन संस्थानों के विकास के लिए हानिकारक है। पहले से ही पुस्तकालयों एवं प्रयोगशालाओं जैसी सुविधाओं के अभाव से जूझते विश्वविद्यालयों की एक बड़ी समस्या शिक्षकों की कमी भी बन चुकी है। संसद के पिछले सत्र में शिक्षा राज्य मंत्री सुकांत मजूमदार ने बताया था कि 31 जनवरी, 2025 तक विश्वविद्यालयों में 5,410 से अधिक शिक्षकों के पद रिक्त हैं। नीति आयोग की हालिया रिपोर्ट बताती है कि राज्य विश्वविद्यालयों में 40 प्रतिशत से अधिक अध्यापकों के पद खाली हैं। देश भर में ज्ञान के नए-नए केंद्र तो खुल रहे हैं, पर उनमें अध्यापकों की कमी है। शिक्षकों की कमी के चलते शैक्षणिक सत्र समय पर पूरे नहीं हो पा रहे हैं।

शिक्षकों के रिक्त पद भरने के मामले में यह नहीं कहा जा सकता कि योग्य शिक्षक नहीं हैं। तदर्थ नियुक्त अध्यापकों की संख्या प्राथमिक स्तर से लेकर विश्वविद्यालय तक निरंतर बढ़ती जा रही है। तदर्थ नियुक्तियों का दुष्प्रभाव केवल तात्कालिक नहीं होता। एक अध्यापक की नियुक्ति पीढ़ियों पर प्रभाव डालती है। ज्ञान केंद्रों को ऐसे तदर्थ शिक्षकों के हाथों में छोड़ देना कहाँ तक उचित है, जिन्हें अपने कल की चिंता अधिक हो? ज्यादातर जगहों पर इन्हें स्थायी अध्यापक की तुलना में सीमित या नगण्य सुविधाएं दी जाती हैं। मई 2024 तक उच्च शिक्षा में भारत का सकल



डा. ब्रजेश कुमार तिवारी

**शिक्षा को समकालीन
विश्व के अनुरूप
ढालने के साथ ही
शिक्षण संस्थानों में
शिक्षकों की कमी दूर
की जानी चाहिए**



लिवरपूल विवि के कुलपति के साथ शिक्षा मंत्री • ग्रेट

नामांकन अनुपात 28.4 प्रतिशत था, जिसमें लगभग 1,200 संस्थानों में 4.3 करोड़ से अधिक छात्र नामांकित थे। यह आंकड़ा मौजूदा वैश्विक औसत 36.7 प्रतिशत से काफी नीचे है। भारत का कोई भी शिक्षण संस्थान विश्व के चोटी के 200 संस्थानों में भी शामिल नहीं है। विदेश में बेहतर अवसरों की तलाश में बड़ी संख्या में छात्र देश छोड़ रहे हैं। शिक्षा मंत्रालय के अनुसार, पिछले साल लगभग नौ लाख छात्र उच्च शिक्षा के लिए विदेश गए थे। इन छात्रों ने विदेश में शिक्षा प्राप्त करने पर 5.1 लाख करोड़ खर्च किए। यह पैसा शिक्षा के लिए आवंटित वार्षिक बजट (44,090 करोड़ रुपये) से 10 गुना अधिक है।

वैश्विक जनसंख्या में भारत की हिस्सेदारी 17 प्रतिशत है। इसके बावजूद उच्च शिक्षा के लिए आने वाले विदेशी छात्रों में भारत की हिस्सेदारी महज एक प्रतिशत है। शिक्षा बजट को मजबूती

देने के लिए भारत सरकार ने 2004 में दो प्रतिशत शिक्षा उपकर लागू किया था। 2019 से इस शिक्षा उपकर को चार प्रतिशत शिक्षा एवं स्वास्थ्य उपकर से बदल दिया गया। सरकार के लिए यह उपकर राजस्व का एक स्थायी स्रोत नहीं है, फिर भी 2015 के बाद से इसने कुल शिक्षा व्यय का 70 प्रतिशत वित्त पोषित किया है। इसका मतलब है कि उपकर शिक्षा व्यय का एक नियमित तरीका बन गया है। हमारे राज्य विश्वविद्यालय निरंतर कम होते वित्त पोषण से प्रभावित हैं, जिसके परिणामस्वरूप बुनियादी ढांचे और शैक्षणिक मानकों में गिरावट आ रही है। उनका फंडिंग मॉडल छात्र-शुल्क पर अत्यधिक निर्भर करता है। इसके कारण कई छात्रों से गुणवत्तापूर्ण शिक्षा लगातार दूर होती जा रही है। शिक्षा जगत की समस्याओं का समाधान प्राथमिकता के आधार पर किया जाना चाहिए, क्योंकि शिक्षा देश के आर्थिक विकास की आधारशिला होती है। इसके लिए उद्यमिता शिक्षा पर जोर देना होगा और छात्रों को इतना सक्षम बनाना होगा कि जब वे स्कूलों/कालेजों से बाहर निकलें तो देश को आगे ले जा सकें। प्रो. यशपाल समिति द्वारा 2009 में की गई सिफारिशों भी प्रासंगिक हैं, जिसमें उन्होंने उच्च शिक्षा के लिए अधिक धनराशि आवंटित करने और निजी निकायों पर कड़ा विनियमन और निगरानी रखने की सिफारिश की थी।

अगले माह नई राष्ट्रीय शिक्षा नीति को लागू हुए पांच वर्ष पूरे हो जाएंगे। अतिरिक्त धन आवंटन के बिना पूरे देश में राष्ट्रीय शिक्षा नीति की सिफारिशों को लागू करना कठिन है। डिजिटल इंडिया, मेक इन इंडिया और स्किल इंडिया जैसे महत्वाकांक्षी कार्यक्रम तभी सफल होंगे, जब विभिन्न 'रेवई स्कीम' का पैसा शिक्षा एवं अनुसंधान क्षेत्र में लगाया जाए। विकसित भारत के लिए शिक्षा की गुणवत्ता का आधार मजबूत होना आवश्यक है। भारतीय शिक्षा को समकालीन दुनिया के अनुरूप ढालने के साथ शिक्षण संस्थानों में शिक्षकों की कमी को जल्द दूर करना चाहिए।

(लेखक जेएनयू के अटल स्कूल आफ
मैनेजमेंट में प्रोफेसर हैं)

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हार्वर्ड का ख्वाब टूटा तो किसे होगा फ़ायदा



सुटेल वहीद

अमेरिकी राष्ट्रपति डॉनल्ड ट्रंप ने उन विदेशी स्टूडेंट्स के अमेरिका में प्रवेश को छह महीने के लिए स्थगित कर दिया है, जो हार्वर्ड यूनिवर्सिटी में पढ़ना चाहते हैं या एक्सचेंज प्रोग्राम में भागीदारी करना चाहते हैं। यही नहीं, ट्रंप प्रशासन ने हार्वर्ड के साथ किए गए 10 करोड़ डॉलर के संधीय करार को रद्द करने की तैयारी भी शुरू कर दी है। 14 अप्रैल को उसने हार्वर्ड को दी जाने वाली 220 करोड़ डॉलर की रकम रोकने का फैसला किया था। आरोप है कि वह कट्टरपंथी और यहूदी विरोधी माहौल है। ट्रंप प्रशासन इस मामले को राष्ट्रीय सुरक्षा से जोड़ रहा है।

रिसर्च की आजादी वास्तविक हार्वर्ड की भी नहीं। नासा, नेशनल साइंस फाउंडेशन और कई अन्य संस्थाओं के बजट में भी 40 से 55 फीसदी कटीती प्रस्तावित है। इसके बाद कई विश्वविद्यालयों ने नई भर्तियां बंद कर दी हैं। कुछ संस्थानों ने रिसर्च स्कॉलर के

दाखिले तक रोक दिए हैं। ऐसे में सवाल उठता है कि क्या अमेरिका साइंस और साइंटिफिक रिसर्च का अगुआ नहीं रहेगा? ध्यान रहे, इंटरनेट, मोबाइल फोन, कैसर और दिल की बीमारियों के इलाज जैसी ऐतिहासिक खोज अमेरिका में ही हुई है।

अन्य देशों को अवसर ट्रंप के इन फैसलों से कनाडा, यूरोप और ऑस्ट्रेलिया की बन आई है। कनाडा ने 'कनाडा लीडर्स' नाम से भर्ती अभियान शुरू किया है, जिसमें अमेरिका से युवा बायोमेडिकल वैज्ञानिकों को बुलाना है। फ्रांस की एक्स मासै यूनिवर्सिटी ने 'सेफ प्लेस फॉर साइंस' प्रोग्राम चलाया है। उसे अब तक 300 आवेदन मिले हैं, जिनमें 139 अमेरिका से हैं। जर्मनी की मैक्स प्लांक सोसाइटी के 'लीजे माइटर प्रोग्राम' को इस साल अमेरिका से तीन गुना ज्यादा आवेदन मिले।

ऑस्ट्रेलिया ने भी 'ग्लोबल टैलेंट अट्रैक्शन प्रोग्राम' का ऐलान किया है, जिसमें आकर्षक वेतन और स्थानांतरण पैकेज दिए जा रहे हैं। ब्रिटेन की एक ग्लोबल रिक्रूटमेंट फर्म के अनुसार,



कॉमन रूम

अमेरिका से आने वाले 'कोल्ड कॉल' यानी खुद से नौकरी की पछताह में 25 से 35 फीसदी की बढ़ोतरी हुई है।

भारत की स्थिति भारतीय अकादमिक और बौद्धिक वर्ग की इस पर प्रतिक्रिया नहीं आई है और वैज्ञानिक समुदाय कैसा महसूस कर रहा है, यह भी नहीं पता चला है। लेकिन अमेरिकी रिसर्च नेटवर्क टूटा तो उसका असर पूरी दुनिया पर पड़ेगा। भारत के वैज्ञानिक संस्थान कई वर्षों से निष्क्रिय से दिख रहे हैं। कोविड की

जो वैक्सीन आनन-फानन में बनी, उस पर अभी तक संशय बरकरार है। रक्षा और अंतरिक्ष विज्ञान के अनुसंधान को छोड़ ऐसी कोई बड़ी भारतीय वैज्ञानिक खोज, जिसने दुनिया का ध्यान आकर्षित किया हो, काफ़ी समय से उसका इंतज़ार है।

टैलेंट वॉर देश में सरकारी और निजी यूनिवर्सिटीयों के बीच 'टैलेंट वॉर' भी छिड़ी हुई है, जिसमें निजी संस्थानों की साख में होते इजाफे ने टैलेंट बाजार का रुख मोड़ रखा है। लेकिन अभी निजी विश्वविद्यालयों की उम्र इतनी नहीं हुई है कि इनका पैदा किया टैलेंट सामने आए।

टूट रहा है ख्वाब ट्रंप पिछले कार्यकाल में मेक्सिकन वॉल को लेकर बेहद मुखर थे। तब किसी को अंदाजा नहीं था कि दोबारा सत्ता में आने पर वे टैलेंट को भी रोकने की दीवार बना देंगे। हार्वर्ड किसी भी प्रतिभाशाली विद्यार्थी का ख्वाब रहा है। पहुंच से दूर, ऐसे सपने देखने का भी साहस सभी को नहीं होता। लेकिन ऐसा ख्वाब टूट जाए, इसे वह भी मुश्किल से ही बर्दाश्त कर पाएगा जो हार्वर्ड जाने का ख्वाब देखने से भी डरता है।

28/1/16

US visa curbs rework India students' global ambitions



Patralekha Chatterjee

Dev 360

Over 330,000 Indians studied in the United States in 2022-23, pouring nearly \$10 billion into the American economy. Families frequently took loans, mortgaged homes, or depleted savings built up over generations, firmly convinced that this was the surest path to a significant opportunity for their children. Today, while that "American dream" is not quite dead, it is now definitely under siege.

Suspended visa interviews, intense social media scrutiny and the looming threat of deportation for minor missteps under the Trump administration have turned the F-1 student visa from a gateway to a precarious gamble.

Indian students with global ambitions, however, remain undeterred. They are setting sail in new directions.

The rise in interest in the US EB-5 programme is one such direction. There have been numerous reports in the Indian media about an uptick in the EB-5 route. A steep path, it demands a minimum \$800,000 investment in a US business, promising permanent residency if the investor can create or preserve 10 full-time jobs. But this is no golden ticket. As US-based professor Gaurav Sabnis points out: "EB-5 cannot be a 'hedge' for F-1 visa holders".

In a recent post on microblogging platform X, Prof. Sabnis pointed out that only 700 EB-5 visas can be given to Indians in any given year. So, there are bound to be backlogs. "Even if there were no backlog, how many desis on a F-1 (student visa) have several million dollars' worth of white money," he quipped. "You need a solid business plan for EB-5, including details on investors and where your money came from. You need to prove that your funds are legitimate, pass background checks, and invest in designated high-growth areas. And even then, with only about

700 visas issued annually, it is a long shot. It is not like they must give out 700 of those visas a year to Indians. They can give zero if the bureaucrats do not like the business plan. It is not easy creating 10 jobs," he noted.

An EB-5 investor must invest the required amount of capital in a new commercial enterprise that will create full-time positions for at least 10 qualifying employees, according to the US Citizenship and Immigration Services (USCIS), which comes under the US department of homeland security that administers the country's naturalisation and immigration system. A qualifying employee is a US citizen, lawful permanent resident, or other immigrant authorised to work in the United States, notes USCIS.

Faced with rising rejections and unpredictability, Indian students are rewriting the rules of global ambition. Increasingly, they are looking east towards other countries in Asia, as well as Europe. Many students are looking towards Japan, South Korea and Singapore, as well as Germany, France, Ireland and Netherlands over traditionally favoured study destinations like the US, UK, Canada, and Australia, according to many education consultants. The UK continues to be an attractive academic destination. However, recent immigration policy changes have made it more restrictive. The University of Tokyo, National University of Singapore and top Hong Kong institutions are seeing a steady stream of Indian applications.

These institutions offer top-tier education — often in English — at a fraction of the cost of US or European universities. Their programmes are globally ranked, their campuses modern, their outcomes competitive.

A senior Indian executive, speaking about his son's academic preferences, shared a telling shift. "He is seriously considering Tokyo or Singa-

India's global ambitions are hampered by structural weaknesses. Four Indian universities have secured spots, but all experienced a decline in their rankings compared to last year.

pore over lower-tier US colleges. Their reputation, affordability, and career outcomes are simply more compelling."

These preferences are further shaped by India's domestic education bottlenecks. Despite achieving 99 per cent in board exams, students are often unable to secure seats in top Indian colleges. The pressure of hyper-competitive entrance exams, especially for non-STEM fields, pushes families to explore alternatives that align better with student interests and economic prudence.

What emerges from this transition is the evolution of a new archetype: The global Indian student — ambitious, mobile, and resilient.

As the US tightens its gates, Indian students are proving a powerful truth: talent goes where it is welcomed. And where it is nurtured, it thrives. For many young Indians, while the emotional cost of the American dream's decline is real, so too is the opportunity embedded in its redefinition.

India's policymakers must recognise the long-term strategic implications of this mobility. Students trained abroad are not only knowledge recipients; they are influence carriers. To contextualise India's moment, it is useful to examine the Chinese student response to global education shifts. With massive state-backed investment, China's top two universities, Tsinghua and Peking, have edged closer to the global top ten. China now produces the highest number of PhDs globally, surpassing the US and boasts an increasingly competitive domestic academic ecosystem. China has overtaken the US as the world leader in both scientific research output and "high impact" studies, according to a report

published by Japan's science and technology ministry. London's *Guardian* reported in August 2022.

This shift owes a lot to China's national strategy focused on education, research funding and talent development. Chinese students with global ambitions are looking for alternative destinations, but staying home does not mean foregoing global success.

Most education consultants in India advise factoring in the domestic option. India has some excellent schools, colleges and universities but it needs to do a lot more if it wishes to retain and attract talent. India is the world's fourth largest economy but continues to grapple with the challenge of ensuring quality learning outcomes despite achieving near-universal enrolment at the primary level, as a recent Unesco report has revealed.

India's global ambitions are hampered by structural weaknesses. The Times Higher Education World Reputation Rankings 2025 reveal that four Indian universities have secured spots, but all experienced a decline in their rankings compared to last year. The Indian Institute of Science in Bengaluru, which previously ranked between 101 and 125 in 2023, has fallen to the 201-300 band, alongside IIT Delhi and IIT Madras, both of which also dropped from higher bands.

India's policymakers must respond with urgency. This means more public investment in the education sector and research, more bilateral educational agreements, better visa support mechanisms, alongside strengthening the global visibility of Indian institutions. Equally necessary are fostering cross-cultural competencies, digital skills and entrepreneurial mindsets among students preparing for an interdependent world.

For Indian students and their families, the message is clear: Define success on your own terms. Do not cling to old scripts. The map of hope and opportunity is being redrawn — and you could be holding the pen.

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Students, Learn to Sweat It Out



Suresh Prabhu & Shobhit Mathur

We obsess over academic rankings, demographic dividend, digital transformation, AI... and, yet, we ignore a far more urgent issue — decline in student motivation. Attendance rates in classrooms are dropping. Teachers are struggling to hold the attention of distracted learners who are more connected to screens than to their surroundings. Without addressing this crisis, we are failing an entire generation. We need to build physical vitality to develop intellectual sharpness.

Studies have shown that physical activity stimulates neurogenesis, sharpens focus and enhances memory retention. In the 1960s, the US launched the Presidential Fitness Test, a nationwide initiative for instilling physical discipline and fitness in schoolchildren. It was a response to growing concerns about the physical and mental unre-

paredness of young Americans. The same argument must now be made for undergraduate education in India, where physical education has been treated as a non-essential, secondary subject.

The link between physical activity and mental health is an established fact. Anxiety, depression and attention disorders are at an all-time high among college students, fuelled by sedentary lifestyles and relentless digital consumption. A structured physical curriculum can serve as a potent countermeasure, not just to calm restless minds but to cultivate focus, discipline and resilience.

Recent studies show that regular physical activity is as effective as medication for mild-to-moderate depression. Aerobic exercise enhances attention, emotional regulation and psychological stability. Physical activity can also mitigate substance abuse by releasing dopamine and reducing stress, two critical factors in addiction.

India's youth are more digitally connected than ever before. This hyper-connectivity has come at a steep cost — loneliness, and erosion of essential life skills like communication, teamwork and leadership. Physical hobbies and team sports are natural incubators for these skills, pushing students to face real-world challenges.



Not just for kicks

Yet, as educators and regulators, we have collectively decided that such life skills are expendable, as if the only goal of higher education is to produce job-worthy coders and analysts. It's time to reclaim physical education as a crucible for character and leadership development.

Consequences of neglecting physical education are not just psychological. They are physical. Do a full-body test of an 18-year-old today and you will see adverse reports. Low levels of vitamin D and B12 and iron are common. Lifestyle diseases like diabetes and obesity are reaching high proportions among young adults. We are producing graduates who may be academically accomplished, but are physically weak, mentally fragile and emo-

tionally disconnected. We cannot profess lofty national goals and continue to churn out degrees, while ignoring the fundamental health and fitness of our youth.

As AI and automation increasingly absorb cognitive tasks, value of human physicality and grit is poised for a resurgence. That is where we may continue to have an edge over machines. The future will not belong to the best coders. That is a job machines are increasingly getting better at. The future will belong to those who can excel in the physical world, a realm machines are yet to conquer.

Developing physical competencies and skills — with the ability to face the heat and dust — is not just a nostalgic nod to the past. It's a strategic need for a world in flux.

Lecture-based teaching is outdated. The future of education is becoming increasingly experiential. Internships will be longer. Projects will be more physically demanding. Learning outcomes will be more tangible. To prepare our youth for this evolving educational model, we must first condition their bodies and minds to withstand rigours of real-world learning.

Prabhu is former minister, GoI, and Mathur is vice-chancellor, Rishihood University

27/76

It's Not How We Talk, It's What We Do

Language battles are raging in India. But they are irrelevant when it comes to what the country needs: an enabling environment to stop migration of talent

Anjana Menon



Bengaluru, India's tech capital, is suddenly in combat mode – a poor fit for a city known for its easygoing, friendly nature. Language has become a flashpoint between locals and the city's growing population of newcomers.

Locals want non-Kannada speakers to adopt the language. Trouble is, with one of the fastest growing migrant populations of any city, they might win the battle but lose the war. These pyrrhic victories do little to improve what truly matters: Bengaluru's increasingly woeful infrastructure, to begin with.

Some time back, in a skirmish that played out on social media, a branch manager of a public sector bank was seen having an irate conversation with a customer in Bengaluru, who insisted she speak in Kannada. The exasperated manager, no doubt a migrant, said she didn't know the language and therefore resorted to Hindi. It then became an ugly face-off about language and identity in what should have been resolved using Google Translate or even a local colleague who spoke the language.

Instead, it became fodder for politicians and celebrities, with everyone weighing in on a language battle masked as local pride. French sociologist Pierre Bourdieu called language a form of cultural capital – mastery gives you access to power, privilege, belonging and opportunity.

In India, a federation of states bound together more by a sense of Indianness than by language, English, for decades denoted access and privilege. But in the new aspirational India, the real capital is ideas and ambition. Language is a gateway to opportunity, but not the only one.

Still, language as a means of power continues to dominate discourse. One of the more striking shifts

under the current administration at the Centre has been the repositioning of English as the language of a "liberal and irrelevant elite". Power speaks in Hindi, rouses the national spirit, and is being suggested as the language that should be adopted by the masses.

For hundreds of millions of Indians, who do not belong to the country's most populous state, UP, speaking in Hindi can be as frustrating as asking a non-Kannadiga to speak fluent Kannada.

Our language power play both at the national and local level, has to take a step back because what keeps us from being world-class is not our linguistic diversity.

It no longer matters whether you live in Kerala, which ranks highest on sustainable development goal indices, or in Bihar, at the bottom of the rung, as a Bimaru or sick state. The real issues citizens face are collapsing roads and bridges, mounds of garbage in cities, struggling municipalities and flooded homes after just a few hours of rain.

It is toxic air that's making citizens sick, the disenchantment with public schools, and overwhelmed healthcare systems that deserve more of our time and attention. It's the lack of research and development in our universities and poor skill development among youth that are fueling frustration and driving emigration.

India's best and brightest continue to look overseas – not because they get the chance to speak a foreign language eloquently, but because they find access to capital, clean air, and decent public schools for their children. In those places – Google, Apple, and even a

Johns Hopkins or Cornell and others – throw at them the resources they need to innovate and excel.

Eventually, it all adds up, providing an environment that helps them thrive.

In the case of Bengaluru too, it's the diversity of the population that has made it India's vibrant tech capital. Many of its storied start-ups have been founded by non-

locals whose businesses have scaled and grown because they have benefited from people and capital from not just other parts of India but overseas as well.

Some of the most dynamic cities in the world are beneficiaries of large immigrant populations which bring their own drive and survival skills to the table, be that London, New York or Singapore.

Some of the world's most successful companies have purposefully hired for diversity because it creates constructive creative conflict and breakthroughs. As language tech evolves, translation barriers will soon fade. Language won't overwhelmingly determine our ability to advance – and it shouldn't.

By limiting our world to just those who speak our language, we're robbing ourselves of the chance to do better. The thing we need to fight is the flight of human talent. Some in the political class may see value in exploiting linguistic divides. But we elect them to deliver better public goods and services, not social discontent.

Our differences – language, caste, religion – are real. But they must not become tools to distract us. The prize we should keep our eyes on is a better quality of life for all.

The writer is an author, entrepreneur and host of the satirical podcast 'The Nation Wants No More'



जेंडर को लेकर संवेदनशीलता पर JNU की अच्छी पहल... लेकिन कुलगुरु भी तो पुरुष है !



नमिता जोशी

NBT द्वारा चलाई जा रही बराबरी की भाषा मुहिम का जो उद्देश्य है - पेशेवर और सार्वजनिक भाषा में सच्ची लैंगिक समानता लाना - उसी दिशा में एक कदम हाल ही में जेएनयू ने उठाया है। विश्वविद्यालय प्रशासन ने

अपने डिग्री सर्टिफिकेट्स में 'कुलपति' शब्द को हटाकर 'कुलगुरु' करने की घोषणा की है। इससे हमारी यह बात फिर से साबित होती है कि भाषा, जैसी वह है, gender neutral नहीं है। JNU को इस जागरूक कदम के लिए बधाई दी जानी चाहिए लेकिन जब हमने 'गुरु' शब्द की जड़ों की पड़ताल की, तो हमें यह भी समझ में आया कि यह शब्द स्वयं में लिंग-तटस्थ यानी जेंडर न्यूट्रल नहीं है।

जेएनयू प्रशासन का कहना है कि यह बदलाव लैंगिक समावेशन (inclusive) और तटस्थता (gender neutrality) को बढ़ावा देने के लिए किया गया है। पहली नजर में यह सुनने में अच्छा लगता है, जैसे मानो भाषा की पुरानी दीवारों को ढहाया जा रहा हो और समावेश की नई इमारत खड़ी की जा रही हो। लेकिन जैसे ही हम 'कुलगुरु' शब्द की तह में जाते हैं, वहां से पितृसत्ता (Patriarchy) फिर झांकने लगती है।

कुलगुरु शब्द दो हिस्सों से मिलकर बना है- कुल, जिसका अर्थ वंश, परिवार या यहां विश्वविद्यालय से है और 'गुरु', जो परंपरागत रूप से शिक्षक या मार्गदर्शक को कहा जाता है। यहीं से जेंडर की उलझन शुरू होती है, क्योंकि 'गुरु' शब्द संस्कृत में मूल रूप से पुल्लिंग है। इसका स्त्रीलिंग रूप कहीं-कहीं 'गुर्वी' या 'गुरुआइन' के रूप में मिलता है, लेकिन मुख्यधारा की भाषा और संस्कृति में 'गुरु' आज तक लगभग पूरी तरह पुरुषों के लिए ही इस्तेमाल होता रहा है। इसलिए भले ही तकनीकी तौर पर इसे जेंडर-न्यूट्रल मानने की कोशिश हो रही हो, लेकिन व्यवहार में यह शब्द आज भी पुरुष प्रधान ही है।

पुराणों और महाकाव्यों में जिन लोगों को 'कुलगुरु' कहा गया, वे सभी पुरुष ही रहे - जैसे ऋषि वसिष्ठ, जो राम और उनके भाइयों के गुरु थे या शतानंद ऋषि जो जनक के दरबार में थे। इन गुरुओं की भूमिका एक कुल या वंश के वैचारिक मार्गदर्शक की थी, इसलिए वे 'कुलगुरु' कहलाए। लेकिन क्या कभी किसी महिला को यह उपाधि दी गई? नहीं। भले ही गार्गी जैसी विदुषी



गुरु का व्याकरण

कामताप्रसाद गुरु, जिनका जन्म 1875 में सागर (मध्य प्रदेश) में हुआ था और मृत्यु 16 नवंबर 1947 को हुई थी, एक प्रसिद्ध वैयकरण (Grammarians) थे। उनका ग्रंथ 'हिंदी व्याकरण' हिंदी के सबसे प्रामाणिक और व्यापक व्याकरणों में से एक माना जाता है। उसमें गुरु का स्त्रीलिंग गुर्वी दिया हुआ है लेकिन विशेषण के तौर पर। संस्कृत या हिंदी के शब्दकोशों में भी गुर्वी शब्द है मगर उसका अर्थ महिला गुरु नहीं, गुरुपत्नी है। चूंकि तब स्त्री गुरु की परंपरा नहीं थी इसलिए विदुषियों के लिए अलग से कोई शब्द ही नहीं गढ़ा गया। स्पष्ट है कि गुरु या कुलगुरु पुल्लिंग शब्द हैं और वे कहीं से भी महिलाओं के लिए उचित प्रयोग नहीं लगते।

ऋषियों से दार्शनिक वाद-विवाद करती थीं, मैत्रेयी आत्मा और ब्रह्म पर गहन संवाद करती थीं या लोपामुद्रा वैदिक ऋचाएं रचती थीं - इन्हें कभी 'कुलगुरु' नहीं कहा गया। इनके लिए 'ब्रह्मवादिनी' या 'ऋषिका' जैसे शब्द थे, जो सुंदर हैं। समाज में वैसे सम्मानजनक पद नहीं प्राप्त कर पाईं जैसे 'कुलगुरु' का है।

जेएनयू से पहले मध्य प्रदेश और राजस्थान ने भी यह बदलाव किया है। यह कोशिश सतह पर तो संवेदनशील लगती है, पर इसका व्याकरण और व्यावहारिक परिप्रेक्ष्य देखने पर पता चलता है कि यह बदलाव अभी भी उसी परंपरा में अटक रहा है, जिसमें 'गुरु' पुरुष ही होता है और 'गुरुता' उसके एकाधिकार में।

बराबरी = की भाषा नवभारत टाइम्स की पहल

बराबरी की भाषा क्यों है जरूरी?

जेंडर न्यूट्रल शब्द गढ़ने की होड़ में एक बार फिर पुरुषवाचक शब्द का उपयोग करना दर्शाता है कि एनबीटी की 'बराबरी की भाषा' जैसी मुहिम कहीं ज्यादा सटीक और दूरदर्शी है। हमारी यह मुहिम भाषा में सिर्फ न्यूट्रल शब्द जोड़ने के प्रम में नहीं उलझती, बल्कि बराबरी को ही अपना लक्ष्य बनाती है। 'कुलगुरु' जैसे शब्द एक खानापूर्ति की तरह लगते हैं, जो लिंग के सवाल को संस्कृतनिष्ठ लबादे में छिपा देते हैं, जबकि 'बराबरी की भाषा' मुहिम पूरा सवाल ही पलट देती है। अगर 'कुलगुरु' का स्त्रीलिंग नहीं है, तो क्या हम कोई नया शब्द नहीं गढ़ सकते जो महिला, पुरुष और अन्य सभी की पहचान को एकसमान प्रतिष्ठा दे सके? हमारी पहल परंपरा के नीचे दबे शब्दों को नहीं उठाती, बल्कि नए शब्दों से नई परंपरा की नींव रखने की बात करती है। इसीलिए भाषा में सच्चे समावेशन के लिए केवल तटस्थता नहीं, बराबरी जरूरी है और उसके लिए 'बराबरी की भाषा' जैसी पहल ही सही दिशा है। जेंडर न्यूट्रल भाषा सिर्फ तटस्थता लाती है, जबकि बराबरी की भाषा महिलाओं की पहचान और हिस्सेदारी को स्वीकारती है। यह सिर्फ छुपाना नहीं, बल्कि समानता को दिखाना और मजबूत करना है!



**JASPREET
BINDRA**

AI versus First Jobbers

Here are six tips for bright young students as AI threatens entry-level jobs

Artificially Intelligent: Don't Aristotle let set the no. among the players in predicting that AI would displace entry-level jobs, while collar jobs within the firm. Anand Kumar, a senior leader in LinkedIn, says "the bottom rung of the job ladder is being hit", with entry-level coding, post-grad level research and data science roles being "replaced with AI".

Mohit Kaur of TechTrends says, "These roles are in good stead to be replaced by AI, but not by AI, because AI needs a human touch to be effective."

Even in my firm company, we have "replaced" a couple of junior researchers with AI tools like OpenAI and Perplexity.

This phenomenon of entry-level jobs being under AI threat is not only anecdotal. Bureau has heard evidence of this on LinkedIn, with 50%-60% of all above agreeing that AI might eventually take on some of the entry-level roles and tasks. The latest US job data reveals that the unemployment rate for college grads has risen by 26%, compared with about 18% for all workers.

Layoffs by big tech and consulting firms support this assertion. PwC recently laid off 1,500 US employees, most of them recent hires. Microsoft got rid of about 1% of its hires. After losing software engineers worldwide, most of them software engineers and project managers, Amazon has seen by the Sports CEO board taking investing

and engineering as first priority, AI not do that job before they're a human being.

AI EFFECT IS DIFFERENT

Technology has always replaced jobs, but not always in the same way. It has been creating new, much more jobs. The IT wave put old jobs like clerks and stenographers in the past, but created millions of software development and IT support jobs. Microsoft is going through a similar transition.

AI, however, is different in the sense that it is a general technology—one of the kind, rather than of the kind. So, it equally threatens all the knowledge worker and the creative jobs.

What seems different with AI is how it is impacting first jobs and entry-level workers. This is dangerous, as it is in the formative years that youngsters learn skills and gain experience.

Writing code and debugging are just the first steps in a career in software engineering. It is for people who are not yet ready to do the job of a professional. It is for people who are not yet ready to do the job of a professional. It is for people who are not yet ready to do the job of a professional.

These are, unfortunately, the tasks that AI can do best. They are the tasks that AI can do best. They are the tasks that AI can do best. They are the tasks that AI can do best. They are the tasks that AI can do best.



Then, currently, AI seems to be replacing the first people... with their learning and experience.

With our obsession for software and IT, it was not only our junior or mid-level employees but graduates who joined tech firms as software engineers. Legions of mechanical, electrical and civil engineers were hired into the same. There is a whole world is left out there outside of software. Most of the big firms are now hiring engineers in mechanical, electrical and civil.

So, what do you do, if you are a bright young college student, as the parent of a child in this age of AI? Here are six thoughts.

As a parent, among other things, we're educating for the power plant and data science jobs that AI has created. This huge shortage of mechanical engineers in data science studies in the US are earning significantly more than software engineers. Simply put, say hello to the revolutionary idea that mechanical and electrical engineers are in demand.

Be a software engineer and a chef: The definition of literacy has changed. It was about reading, writing and arithmetic; now it is being able to work creatively with AI tools and systems. Young people, including those in the AI field and others, are not adapting to be AI literate. They are not learning to use AI tools in their job search. At IBM, even graduates are reportedly leveraging AI tools and handling the jobs that used to be done by employees with five years' experience. Big data firms are overhiring entry-level people to work on complex projects that no one else can do.

Do this: You are a good fit: With our obsession for software and IT, it was not only our junior or mid-level employees but graduates who joined tech firms as software engineers. Legions of mechanical, electrical and civil engineers were hired into the same. There is a whole world is left out there outside of software. Most of the big firms are now hiring engineers in mechanical, electrical and civil.

Build Human Skills: Humans will be the only ones who can do the jobs that AI cannot do. The jobs that AI cannot do are the jobs that humans can do. The jobs that AI cannot do are the jobs that humans can do. The jobs that AI cannot do are the jobs that humans can do.

best, ethics, human relations, and (3) social skills. The jobs that AI cannot do are the jobs that humans can do. The jobs that AI cannot do are the jobs that humans can do. The jobs that AI cannot do are the jobs that humans can do.

Become an entrepreneur: Entrepreneurs and small business owners, not large firms, are the ones who will choose to become entrepreneurs. The New York Times writes about how AI is changing the way we work. In the future, fewer graduates are considering going into corporate careers, and more of them are starting their own businesses.

Be a software engineer and a chef: The definition of literacy has changed. It was about reading, writing and arithmetic; now it is being able to work creatively with AI tools and systems. Young people, including those in the AI field and others, are not adapting to be AI literate. They are not learning to use AI tools in their job search. At IBM, even graduates are reportedly leveraging AI tools and handling the jobs that used to be done by employees with five years' experience. Big data firms are overhiring entry-level people to work on complex projects that no one else can do.

Build Portfolio Careers: There is no rule that people must do only one job at a time. As AI rolls in, multiple skills will become much more important. Be a software engineer and a chef, qualify as a designer and run a portfolio career, build a website as well as for children. Think of your career not as a linear progression in a single industry, but a portfolio of careers juggling.

Become an apprentice: Before this year, young people entered jobs as apprentices. They would pay a master blacksmith or surgeon to teach them their craft, before starting up a practice of their own. The modern corporate organization has replaced that with apprenticeship programs during their first years. As AI replaces basic skills and routine work, there could be a revival. These would be the jobs that AI would not be able to do, so we claim the right to them.

Reads from author and entrepreneur
S.T./g/a
Positive person

A. Joseph Dorairaj

The art and skill of questioning

Why students should be encouraged to not take anything for granted and think critically

In *Theaetetus*, Socrates talks about his maieutic method. He tells Theaetetus, his interlocutor: "... my skill of midwifery is, in general, similar in character to theirs [midwives]... the greatest thing about my skill is that it is able to test, in every respect, whether the mind of the young man is bringing forth an image and a lie, or something genuine and true. Now, I do have this in common with the female midwives: I bring to birth no wisdom. And many people reproach me for this, since I ask questions of others while I myself proclaim nothing about anything..."

The Socratic method is based on the metaphor of a 'midwife' who does not deliver anything, but ably assists in the delivery of the child. Socrates compares himself to a midwife who, by asking probing questions, enables the youth of Athens 'deliver' the right answers. All he did was to ask his interlocutors a series of inter-connected questions that elicited the right response from them.

Bedrock of education

Questioning is an art and a skill. To motivate the students to ask the right questions and, more importantly, to help them cultivate a questioning mind coupled with a sceptical temperament are the bedrock of any educational system. In classrooms where there are no questions, there is only passivity and information

is consumed mechanically. In such a docile environment, hardly any learning takes place.

Both the temperament and the culture to question are sorely missing in our institutions. As a result, the teacher goes unchallenged and what he/she puts across is rarely critiqued. What is prescribed in the curricula and presented in textbooks is consumed implicitly by naive minds. In the final analysis, our students acquire degrees and diplomas but can hardly think and sift facts from opinions, and look at the

world critically.

The key mandate of higher educational institutions is to train students to think critically. They should be able to analyse and interpret data and arrive at evidence-based conclusions. Put differently, colleges and universities should encourage their students to question just about everything so that they do not take anything for granted.

Problems and solutions

What factors impede questioning in our classrooms? First, teachers do not en-

courage their students to raise questions, as they are in a hurry to 'complete' the syllabus. Questions are considered a digression and waste of time. Second, students are afraid of raising questions for fear of failure. The spectre of raising a silly, inane or wrong question leads to shame and this fear and diffidence holds them back from raising questions inside classrooms. Third, our culture and traditions demand an implicit obedience to gurus and this, indirectly, forbids all of us, from challenging teachers and their

authority. Fourth, in many institutions students are not competent to raise questions in English, which is the medium of instruction. Last, some teachers are intimidated by those who raise questions and see them as an affront to their authority.

What can be done to encourage students to ask question? First, teachers should be friends and mentors rather than authoritarian figures to encourage students open up. Second, teachers should offer prompts and cues. For instance, while teaching a

short story, the teacher can ask, "How do you think the story will end?" In a Maths class, students can be encouraged to guess the sequence of a formula. Third, a climate of debate should be created so that students are not reduced to docile consumers of information dished out to them, and are trained to become 'interrogators' who will be endowed with critical thinking skills.

A questioning mind should not be interpreted as challenging the teachers' authority. Nor should it be seen as being excessively argumentative indulging in empty rhetoric. In other words, a questioning individual should not be looked upon as a negative person who gets on the nerves of people.

The rote system of learning, which reduces students to passive consumers, should be thrown out. In its place, a robust system founded on the Socratic maieutic system that revolves around questions should be welcomed. Ultimately, there should be a transition from raising questions inside classrooms to transforming students into sceptics and dissenters who will not only raise questions but will have a questioning mind as well. Similar to the Cartesian pronouncement, students should be able to declare *interrogo, ergo sum* ("I question, therefore, I am").

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Why defending Harvard is defending free thought



SHELLEY WALLIA

FORMER PROFESSOR, PANJAB UNIVERSITY

WHAT unfolded at Harvard's commencement a few days ago was an act of defiance, a moment of intellectual resilience against the creeping resurgence of authoritarian impulse, as expressed by Harvard's President Alan Garber, when he underscored the transnational character of the university's student body. Similarly, at MIT's commencement ceremony, the Indian student, Megha Vemuri, Class of 2025 president, delivered an unsanctioned pro-Palestine speech that criticised the university's ties with the Israeli military.

Harvard, on that day, stood for its graduates as also for the principle that knowledge must remain unshackled and anchored not in power but in the demands of truth.

As families gathered to recognise excellence, across the Charles River, a federal courtroom was hearing a case that struck at the heart of US education. The Trump administration had attempted to bar Harvard from enrolling international students. This was not an immigration matter; it was a weaponisation of bureaucracy to castigate ideological defiance and discipline elite academic institu-

tions into doctrinal alignment with an ethno-nationalist agenda. A judge's intervention to rescind this policy was not a victory but a grave admonition that the executive branch no longer sees the university as a public good. It views it as a political opponent.

The assault on Harvard is part of a larger dangerous campaign to remake US higher education in the image of right-wing populism. The Trump administration escalated its offensive by reimposing visa restrictions and scrutinising research funding and alleged foreign "influence". Couched in the language of national security, this project seeks to dismantle the intellectual infrastructure that sustains critique, cosmopolitanism and dissent.

Nowhere is this clearer than in the emergence of a sinister initiative known as Project Esther, a Heritage Foundation-backed effort to delegitimise and dismantle left-leaning academic and civil society institutions. While Palestine solidarity is the stated target, by conflating anti-Zionism with anti-semitism and political critique with

terrorism, the project seeks to erase the space for adversarial thinking within academia and beyond.

The playbook is global. In India, a decade has gone by undoing academic independence. Campuses have been vilified as "anti-national," students criminalised and incarcerated and humanities slowly defunded to erode critical thought. These governments share a common strategy of reducing the university to an extension of the state, strip it of its critical capacities and recast it as a vehicle for mythological nationalism.

History offers ominous parallels of the McCarthy era (1940s-1954), when scholars were blacklisted for their affiliations, their writings, or even their silence. Disciplines dealing with social justice, labour or imperialism were gutted. Today's tactics may be more bureaucratic and legalistic, but their aim is the same.

It is essential to recognise that the university is one of the few institutions where power can still be interrogated, where dissent can still be formulated with intellectual rigour and where counter-hegemonic thought can take root, where alternative futures can be imagined and where solidarities beyond the confines of the nation-state can be forged.

Defending a university today, is therefore, of safeguarding a space where knowledge is not bought, or coerced, or bent to power. It is a refusal to let political regimes rewrite curricula, censor dissent and undermine the life of the mind. The future of intellectual freedom depends on our ability to resist these incursions. *Trih*

The university is one of the few institutions where power can still be interrogated and dissent formulated with intellectual rigour.

Gender gap in digital literacy

RANJAN KUMAR
PADMAPATI

Bridging this gap is crucial to empower women and address the needs of an increasingly AI-driven and technology-focused job market.

Gender-based digital gap refers to inequalities in access to and use of digital technologies. Women lag behind on most development indicators, including fundamental numeracy and literacy. With progress in the field of digitisation in science, engineering, technology and commerce etc., a new kind of e-literacy indicator has emerged, now known as digital literacy. It is playing a crucial role in the modern world in every walk of life, like banking, the health sector, social platforms, education, marketing, business, tourism, and industries etc., revolutionising the whole concept.

Seeking employment in today's work environment, people discover that the digital component of present-day jobs is more than 90%. The greater the digital skill, the greater the employment opportunity and pay. Hence, advancement in digital literacy among females will ultimately lead to women's empowerment. The World Economic Forum mentions that Information and Communication Technology (ICT) is reckoned as the fundamental skill for the 21st-century job environment. To empower women financially in the modern world, it would predominantly depend on the level of digital competency.

Globally, 70% of men use the internet compared to 65% of women, and 2.6 billion girls and women are still offline. In India, 15% of women use the internet compared to 25% of men. In Least Developed Countries (LDCs), only 19% of women use the internet compared to 86% in developed countries. In 2024, in LDC nations, 29% of women use the internet compared to 41% of men. In India, the most common device, a smartphone, is used by 31% of women only, against 60% of men. Global digital

gender gaps can broadly be classified under the following subheadings: (i) A gap in access to and use of the internet; (ii) A gap in digital skills and the use of digital tools; (iii) A gap in participation in science, technology, engineering, and maths fields; (iv) A gap in technical sector leadership and entrepreneurship at higher levels. Digital gender divides exist both in skill and accessibility.

In the ITI, the broad-based digital skills in the hierarchy from bottom to top level can be summarised as below – (a) Basic skills at the bottom: copy or move a file or folder, use copy and paste tools to duplicate or move information within a document, send e-mails with attached files or documents; (b) Intermediate skills include using basic arithmetic formulae in a spreadsheet, connecting and installing new devices, finding, downloading, installing, and configuring software, and transferring files between a computer and other devices; (c) Advanced skills, at the top of the hierarchy, include writing a computer programme using a specialised programming language.

To be digitally literate in the simplest terms, the above nine headings are the indicators. The gender gap in digital literacy increases with the complexity of skills from the bottom to top level in the hierarchy.

The gap is notably visible from the lowest proficiency level, such as using a mobile phone, to the most advanced skills like coding computer software to support the analysis of large data sets. The gender gaps among the three different stages of the above skills are as follows – in basic skills, 6.7%; intermediate, 7.4%; and advanced skills, 9.8%. Other usual barriers are affordability, women's fundamental literacy

and numeracy (India 74%), income inequality, and social stigmas. Financial constraints are recognised as the most common and dominant cause of inaccessibility to the internet and owning a smart device. Surveys show that 71% of adolescent girls do not own a mobile phone as they cannot afford it in India. In the USA, individuals with less than \$30,000 income per year and less than a high school education have the lowest access to the internet.

According to the Ministry of Science and Technology in India, 14% of women work as STEM professionals, and women represent only 30% in STEM education. As parents consider STEM education to be expensive, reducing coaching costs and initiating scholarships for girls and seat reservations would encourage their enrolment. In Silicon Valley, recruiters report that the applicant pool for technical jobs in AI and data science is often less than 1% among females – a huge gap! Across Indian states, the prevalence of uneven access to digital devices is reflected in the following data: 16.4% of adolescent girls enjoy easy access to digital/mobile devices in Karnataka; West Bengal, 15.4%; whereas Haryana stands lowest at 3.3%, followed by Assam at 3.8%.

There is also a gap in access to digital devices between boys and girls as under: in Assam, it is 86.7% boys / 17.8% girls; Maharashtra, 93.1% / 6.9%. Southern states fare better than others: Telangana shows the lowest disparity at 56% boys / 44% girls and Tamil Nadu, 59.6% / 40.4%. Digital skills are a prerequisite to making optimum use of digital technology. Karnataka, West Bengal, and Maharashtra provide a much better digital-tech environment at colleges and schools. Assam stands at the bottom of the rung at 23%. (Digital Environment

Forum)

Worldwide, women are critically under-represented in AI skills: in software development, 82% / 18%; AI data processing, 81% / 10%; AI cloud applications, 80% / 20%; applied machine learning, 77% / 23%; deep learning, 76% / 24%; generative learning, 69% / 31% (Forbes, November 11, 2024). To close the gap, educational institutions must integrate AI literacy into the core curriculum starting in high school. Engaging girls with STEM subjects early is crucial; waiting until college may be too late, as suggested by some experts in the field. India's current requirement in AI is 1 million and will require advanced degrees in VLSI design (Very Large Scale Integration), and semiconductor technology etc. The female workforce is 25% in the semiconductor industry in India, expected to grow to 35% by 2030. India's semiconductor industry will grow to \$100-110 billion, with skyrocketing demand for semiconductor professionals, poised to generate 1 million or more jobs by 2026.

At the moment, India produces 6,00,000 engineering graduates in electronics-related fields. The Skilled Manpower Advanced Research and Training Institute, Calicut, targets training 1,00,000 engineers within five years. The Tata semiconductor project at Jagirao, targeting 48 million chips a day, will generate 15,000 direct jobs and 13,000 indirect jobs. Not only females but also boys may venture into such semiconductor courses approved by the AICTE at different institutions in India to avail the upcoming employment opportunities. Engineering colleges in Assam may also realign their curricula accordingly.

(The author is a retired DGM of NALCO)

WT/10/6

Healthy eating: Start at the schools

The decision of the Central Board of Secondary Education (CBSE) to establish sugar boards in all its affiliated schools is a good step that promotes healthy eating among children. The CBSE has directed about 26,000 schools to display boards in their premises that will tell the students about the dangers of sugar-heavy diets and the benefits of good eating. This is a timely move when viewed along with reports of increasing incidence of diabetes among children in the country. India, known as the diabetes capital, has over 25% of the world's patients. It is a serious health crisis that calls for strategies to reduce the burden and to ensure that the future generations do not add to this burden.

Studies have reported an increasing prevalence of obesity and Type 2 diabetes among children, particularly among adolescent girls and boys. About 12.5 million children aged between 5 and 19 years were obese in 2022. About 12% of the girls and over 8% of the boys in the adolescent age group were found to be affected by diabetes. Unhealthy food has been cited as an important reason and the CBSE has done well to take a lead in addressing the issue. Among the proposed communication points are the recommended daily sugar intake and the health risks associated with a high intake. The students will also be informed of the sugar content in snacks and beverages that are commonly consumed. This will give the children a good idea of the advantages and disadvantages of their food choices. Children are good learners and smart, creative communication of these themes can have a positive influence on their habits.

Info boards on harmful sugar intake present a compelling campaign model

Information shared about the food choices should also be backed with action. School canteens must ensure that only healthy food is served to the students. Teachers have a major role to play in popularising the idea among children; parents must also be made part of the campaign. These information boards should be prominently displayed on multiple locations in the school campuses to ensure that the message reaches all the students. Other school boards and government schools need to adopt the idea of healthy eating and find ways to communicate it to children through multiple, innovative channels. We live in a consumerist society where fast food has been celebrated and presented to children and adults as an ideal, convenient choice. It is also important that the promotion of fast food is countered with data and facts that are presented in creative, easily comprehended campaigns.

Not Just Spaced-Out, Make Science Go Pop

If all things go space-shipshape, Shubhanshu Shukla will script history later this week as the second Indian to go to space. 41 years after Rakesh Sharma's 1984 mission as part of the Soviet Interkosmos programme, Shukla's Axiom Mission-4 journey to International Space Station (ISS) has reignited public interest in science and space. This is an ideal moment to channel that curiosity and excitement, and turn it into a full-blown trend. Making science exciting — more 'geeky,' less 'syllabus-y' — is key to building generational 'STEM cells'. The newly revamped Hall of Nuclear Power at Delhi's National Science Centre, for instance, uses motion sensors, AI exhibits, 3D walkthroughs and interactive games to make complex ideas



cool. India has only 26 science museums, a scandalous number for a country of its size. It's not just numbers. Sci-zones must be more interactive, immersive, seductive.

Some progress is visible. GoI-funded National Council of Science Museums (NCSM) is building science cities, digital planetariums and innovation hubs. But pace and focus need to quicken. States, too, must step up, expanding and modernising science cons and fests. Models such as the EuroScience Open Forum's 'Science in the City' offer valuable lessons in decentralising and democratising science communication. Not to mention well-produced, well-narrated science shows on streaming and cable TV that focus more on science than on *Indian* science per se.

Pop science must thrive in dynamic public spaces, segueing into incubation centres and knowledge zones. Both brick-and-mortar and online modes should nudge youngsters towards the sheer thrill of 'knowing-doing' science. That way, we can have more Shubhanshu Shuklas sent off 'up there' from our own backyard.

et/c

The illiberal liberal arts

The debate on making universities expansive and tolerant should cast a wider net beyond the founders and administrators of one private institution



DESHKAAL

BY YOGENDRA YADAV

IF WE MUST turn to AI for answers to any and every question, can we not get AI to help us ask the right question? That was the first thought that crossed my mind as I read Sanjeev Bikhchandani's now-public letter to the Ashoka University community.

I read him with sympathy, notwithstanding sharp differences with his public utterances. Ashoka founders who gave time, energy and money to build a first-rate liberal arts university that is truly not-for-profit deserve respect, especially from parents like me whose children have benefited from it. Building and sustaining an institution is a painful and thankless task in the best of times. The challenge is even more difficult under the current dispensation.

I was sad, therefore, that Bikhchandani chose to ask a poor, strawman question: "Are all liberal arts universities activist in nature?" The only possible answer can be no. How can all the universities be alike? Why should the way other universities are be the norm for Ashoka? At any rate, what does it mean for the university to be activist in nature? Would it not be ridiculous to expect the university as an institution to turn activist? I was also embarrassed that Bikhchandani chose to ask this question of a chatbot and not the hundreds of teachers — among the best in the country — at the university of which he is a trustee.

The questions Bikhchandani should have asked are: Does liberal arts education by its very nature foster some form of activism? If so, how should a university that imparts liberal arts education deal with it? Should an active engagement with issues of our time be emphasised in the syllabi and pedagogy of the university? Should this be encouraged in the campus culture? And should such an engagement, by the faculty, students and staff — on campus and off campus — be allowed, if not respected?

Many of these are general questions for any institution, certainly for any educational institution. Any good education — arts, science or whatever — must inculcate among the students a spirit of inquiry. It must develop critical thinking by training the students to interrogate received wisdom and question authority. As Paulo Freire reminded us, education is inherently subversive.

Liberal arts takes it a step further. It invites the students to apply this critical thinking to their own society and their lives. This leads them to question their prejudices and privileges. Even more so for teachers and students of Political Science (such as Professor Ali Khan Mahmudabad), who must interrogate the claims of political authority all the time. As Kartikeya Bhatnagar, an alumnus of Ashoka, puts it in a sharp indictment (published in *ThePrint*) of the university's role in the recent episode: "Liberal arts education — by its very structure — cultivates critical thinking, dissent, and moral inquiry. So yes, activism may not be mandatory, but it is certainly not alien to the tradition."

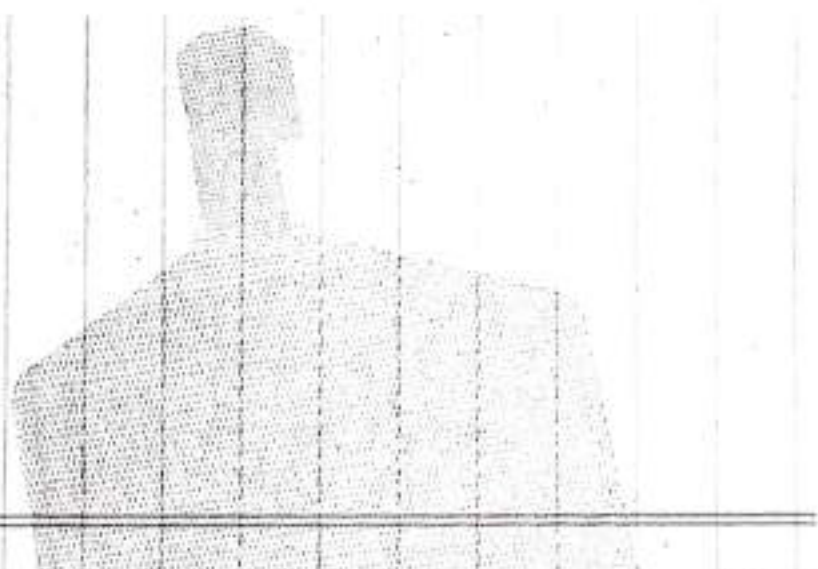
In a sense, the question for a liberal arts university boils down to this: How should it deal with the preconditions and consequences of what it teaches? Quality liberal ed-

ucation requires that those who impart this education should be able to think critically and that the institution should foster a culture of free exchange of ideas. The outcome of a good "humanities" education should be that it produces humans capable of independent judgement, who would wish to act on their convictions in real life. So, can any university, least of all a liberal arts university, fulfil its educational mission without permitting, respecting and fostering active engagement with real-life questions of its time? Such active engagement deserves to be celebrated as a civic virtue. If this is activism, then liberal arts education and activism are connected by an umbilical cord.

This is not to say that a university should get into the business of promoting one kind of partisanship or another. It must ensure that all competing visions and ideologies get a fair space. The political convictions of a teacher like Mahmudabad do not impede education, as long as they are known and up for discussion. The real danger of indoctrination comes from partisanship that remains unacknowledged or passed off as common sense. And yes, there is a need for rules for any such engagement. The university may need to draw some boundaries on what types and modes of action may not be encouraged or permitted within the institutional spaces. But a flat that seeks to decouple critical thinking and civic action would frustrate the very point of liberal arts education.

This foundational debate must not distract from the rather narrow question in Mahmudabad's case, a question Bikhchandani does not address. No one asked the university to own up to every social media post, or academic article for that matter, written by the faculty or students and defend it in a court of law. The real question was simply this: Should an institution, university or otherwise, stand by a member of its community in the face of a politically motivated witch-hunt? Or abandon and virtually drown him at the first hint of a controversy? Even if the institution could not offer legal support, could it not offer moral support? Or at the very least, have kept quiet?

Sadly, on this score, Ashoka University's response left a lot to be desired. The very first response, even before Mahmudabad's arrest, gave in to the insinuation that his post was against the armed forces. Post his arrest, like the media and the government, the univer-



C.R. Sankar

sity, too, presumed that he was in the dock. And now Bikhchandani's letter leaves nothing to the imagination. Mahmudabad stands accused of "institutional capture and selfishness" and hijacking Ashoka's platform for his political agenda, something the university should guard against by framing a policy against a "Politically Exposed Person".

This is not the first time Ashoka has faced issues of how liberal it is in dealing with dissenting faculty. With every instance (including that of freedom to publish academic research as in the case of Sabyasachi Das), the university seems to be leaning in the illiberal direction. If Bikhchandani's letter is to be read as a message from the founders, there is a finality about the signals: The message is loud and chilling.

We do not know the constraints under which the university administrators function. Running a liberal university under an illiberal regime may be a contradiction in terms. The founders might just feel that they cannot take it any more, that they cannot defend their dream without endangering the very existence of the institution, or their business interests. That would be understandable. But then it need not be couched in high moral terms. The victim you cannot defend need not be put in the dock.

We do not know the constraints under which the university administrators function. Running a liberal university under an illiberal regime may be a contradiction in terms. The founders might just feel that they cannot take it any more, that they cannot defend their dream without endangering the very existence of the institution, or their business interests. That would be legitimate. But then it need not be couched in high moral terms. The victim you cannot defend need not be put in the dock.

One final thought. Should this debate not move beyond Ashoka's administrators and its founders, to the Ashoka community, including the faculty, students, parents and alumni? After all, the defence of liberal education in that institution must involve them all. And should this debate not cast its net wider than the best-known and elite institutions like Ashoka? After all, the real tragedy of liberal education in the country is not what has happened at Ashoka, but the manner in which all the major public universities known for liberal education — Jawaharlal Nehru University, Central University of Hyderabad, University of Delhi and Tata Institute of Social Science, to name a few — have been dismantled. In the last instance, activism will not be defended by elite institutions and their well-heeled donors. Activism must be defended by the public. We don't need a chatbot to tell us that.

The writer is member, Swanj India, and national convener of Bharat Jodo Abhiyan. Views are personal.

India's skilled workforce can power the ageing world

The developed world does not require capital; it requires skilled, mobile, and motivated individuals. With a cohesive strategy, legal and ethical frameworks, and a visionary approach; with its young workforce India can become the world's hub for skilled international exports

FIRST
Column

By 2030, the world will face an unprecedented workforce shortage of nearly 50 million in developed economies such as the United States, Germany, Japan, South Korea, Canada, the United Kingdom, and Australia. A recent Global Access to Talent from India (GATI) Foundation report indicates that this deficit could soar to 250 million by 2050 due to an ageing population, declining birth rates, and shrinking domestic talent pools.

While automation and artificial intelligence (AI) may offer some solutions, the pace of technological adaptation will not keep up with the demand for human capital from ageing industrial economies. In this context, India has a significant advantage with its demographic dividend of over 900 million working-age individuals, which is often seen as our greatest asset but could also become a demographic burden. To address this challenge, developing the largest pool of skilled and semi-skilled youth and India established reputation for adaptability and competence could serve as a vital solution.

India exports around 700,000 of its workforce overseas each year, primarily in sectors such as healthcare, transportation, technology, and hospitality. However, this number could increase to 2.5 million annually with an integrated national plan. Such growth in India's workforce exports would not only help meet global demand.

But also, it could generate up to \$360 billion in annual remittances — more than double the current \$129 billion, which ranks India at the top globally. This makes foreign employment a key pillar of India's global economic outreach.

Global Demand Hotspots

The GATI report indicates that 30 nations will account for nearly 90 per cent of the projected global workforce shortage. The United States will require 11 to 12 million additional workers, followed by the United Kingdom (5 to 8 million), South Korea, Poland, Hungary, and the Czech Republic (4 to 5 million each), Germany and Russia (3 to 4 million each), and Japan (2 to 3 million). Other countries, including Canada, Australia, the Gulf states, Taiwan, the Netherlands, Austria, and Italy, will each need an additional 1 to 2 million workers.

Additionally, smaller but high-income nations such as Singapore, Romania, Bulgaria, and Hong Kong will experience shortages ranging from 0.5 to 1 million. The demand is apparent, and India is poised to meet it head-on.

Low to High Skills, All in Demand



The estimated global demand, 70 per cent will be for medium- and low-skilled jobs; approximately 38 to 40 million for low-skilled positions, 5 to 6 million for medium-skilled roles, and 18 to 12 million for high-skilled jobs. Therefore, India's policy must align workforce training with this demand matrix.

The challenge is not just to send more workers abroad but to align the right skills with the right locations and industries. A new approach to migration should focus on these key strategies: understanding global demand, enhancing domestic supply, and building a resilient long-term migration ecosystem.

Scaling up Skills

Regarding demand, India must actively engage with destination countries to harmonise skill certifications and expedite mutual recognition agreements. To scale up skills on the supply side, India needs to invest significantly in enhancing technical education, soft skills, and foreign language training, particularly in countries like Japan and Germany, where language proficiency is crucial. Key strategies to overcome these barriers include school-level language exposure, industry-centric training, and efficient grievance redressal systems. Some forward-thinking state Governments are already making progress. For instance, certain Delhi Government schools have started offering Japanese as a language option and states like Telangana are pioneering reference integration programs.

However, these efforts require a nationwide

INDIA EXPORTS AROUND 700,000 OF ITS WORKFORCE OVERSEAS EACH YEAR, PRIMARILY TO SECTORS SUCH AS HEALTHCARE, TRANSPORTATION, TECHNOLOGY, AND HOSPITALITY. HOWEVER, THIS NUMBER COULD INCREASE TO 2.5 MILLION ANNUALLY WITH AN INTEGRATED NATIONAL PLAN

approach and coordination. It is time for India to establish a centralised agency for global workforce mobility, similar to the Department of Migrant Workers in the Philippines or the Bureau of Manpower, Employment and Training in Bangladesh. Such an organisation could unify all stakeholders — industries, state Governments, skill councils, recruitment agencies, and industry bodies — to coordinate recruitment, ensure ethical migration practices, and monitor global demand in real time. Equally important is developing financial support systems for migration to help cover travel, training, and placement expenses, particularly for low and middle-income workers. The country also needs robust welfare systems to protect Indian workers abroad and facilitate grievance redressal and repatriation support for returnees. Additionally, it is essential to create a safety net and focus on high-demand sectors for Indian talent. Beyond the traditionally prominent fields of healthcare, hospitality, domestic work, and logistics, India should also concentrate on emerging sectors such as green jobs in renewable energy, infrastructure development, digital public goods, and sustainability-linked startups, where skill gaps rapidly widen worldwide.

Addressing Migration Barriers

Despite progress, several challenges remain. Indian qualifications are often not globally recognised, and workers face high migration costs along with risks of exploitation by unscrupulous agents. The politi-

cal discourse surrounding immigration remains contentious in countries such as the US, Canada, and Australia, with much of the opposition focusing on illegal migration. However, skilled, structured, and lawful migration is a top priority for most developed economies, not out of goodwill, but due to economic necessity. These countries require sufficiently skilled staff to sustain growth, support ageing populations, and maintain critical public services. This is where India, with its youthful population and expanding training infrastructure, can position itself as a credible global partner.

Diplomatic Push

Several initiatives have already been launched. For instance, Germany is expanding its Skilled Worker Visa program, while Japan has increased the categories of sponsorship visas available for Indians. These ongoing discussions with Eastern European countries regarding recognising Indian driving licenses. Meanwhile, India is signing Government-to-Government migration agreements with countries such as Australia, Austria, Denmark, Italy, and the UK. Through the Young Professionals Scheme, up to 2,000 Indians each year can reside and work in the UK for two years.

Eight-Point Strategy

India must implement an eight-point agenda to address these challenges effectively. First, it is essential to strengthen institutional coordination between central and state Governments. Second, a national migration agency should be established, incorporating international best practices. Third, skill certification requirements need to align with global standards. Fourth, a national industry association should be created to oversee and facilitate international mobility. Fifth, frameworks for migrant financing and insurance must be developed. Sixth, a new regulatory system must be implemented to monitor recruitment agencies and prevent exploitation. Seventh, support for the reintegration of returnees should be enhanced. Finally, bilateral and multilateral agreements must safeguard labour rights and welfare.

The Way Forward

The developed world does not require capital; it requires skilled, mobile, and motivated individuals. As ageing economies seek workforce support, India is uniquely positioned to provide this talent. With a cohesive strategy, legal and ethical frameworks, and a visionary approach, India can become the world's hub for credible, trained, and empowered individuals. The next wave of growth will not be driven by capital or commodities but by a capable workforce.

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GAPS REMAIN

India has achieved near-universal primary school enrolment, according to UNESCO's *Global Education Monitoring Report 2024-25* released recently. But this means little because the same report also shows that the country, along with many others, continues to grapple with poor learning outcomes. The *GEMR* found that 73% of children in developing countries are unable to read and comprehend a simple text by the age of 10 — a stark indicator of the growing gap between access to education and quality learning. This chasm is also borne out by the findings of the *Annual State of Education Report 2024*, which showed that in India, only 27.1% of Class III and 48.8% of Class V students are able to read a Class II text. The role of well-trained teachers in sufficient numbers in affecting learning outcomes is an oft-highlighted fact. But the *GEMR* stands out for underlining an aspect that often goes overlooked when it comes to discussions on learning outcomes: leadership. The principal of a school has a significant role to play when it comes to ensuring how students are taught and how much of the lessons they are retaining. It is worrying, then, that the *GEMR* revealed that the processes for selecting and preparing school principals lack coherence. In numerous cases, individuals are appointed to leadership roles based on length of service or bureaucratic credentials — West Bengal was cited as an example for this poor practice — rather than on evidence of leadership skills. A survey cited in the *GEMR* also shows that Indian principals are burdened with responsibilities such as data reporting, coordinating mid-day meals and so on, leaving them little time for academic leadership or mentoring teachers. Additionally, the *GEMR* also raised a red flag when it comes to skewed gender representation in leadership roles, leading to unequal learning outcomes for girls and boys.

India is among the 31% of countries that lack formal induction systems for school principals. Perhaps it could take a leaf out of the books of Bangladesh and Vietnam, which have improved learning outcomes by introducing structured reforms in principal recruitment, training, and decentralised school governance. For all its stated goals at the level of policy — the National Education Policy is an example — primary education remains an area of concern. Ameliorative steps must be taken urgently for a study suggests that a child's inability to learn starts a vicious cycle of widespread disillusionment among students, parents and teachers. Breaking this vicious cycle requires effective interventions to improve the standards of primary education. T2/10/10

Engineering humanity & where to draw a line

New research is offering a pathway to genetic optimisation, allowing parents to select not only healthier babies but also the human features they want. India must take the lead in research and set much-needed ethical benchmarks.

The future of human reproduction and genetic design is accelerating faster than most people understand, driven not by national debates or international accords, but by software startups, biotech inventors, and quiet breakthroughs in fertility clinics. Nucleus Genomics recently unveiled Nucleus Embryo, a genetic screening platform that allows prospective parents to assess up to 20 embryos for more than 900 conditions and traits. These include not only polygenic risk scores for diseases such as cancer and Alzheimer's but also traits such as intelligence, height, and anxiety. In short, it offers a pathway to genetic optimisation — allowing parents to select not only healthier babies but the human features they want.

Orchid, another US startup, pioneered full-genome sequencing of IVF embryos for disease screening. Once exclusive to the ultra-wealthy,

Orchid's services are rapidly becoming more affordable, pointing to a future where embryo selection could become a standard step in family planning for both the middle and upper class. Meanwhile, Coinbase CEO Brian Armstrong, known for backing radical biotech ventures, has announced plans to launch a US company that would go beyond selection into embryo editing. Thanks to recent advances in base editing, it is now possible to alter individual DNA letters with high precision rewriting, rather than merely reading the code of life.

The commercial race toward Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) babies has begun — and this is something I have long been both excited and terrified about. In a 2007 Washington Post article, I asked: "Human editing has just become possible. Are we ready for the consequences?" I warned that CRISPR had made embryo editing technically feasible, but that society wasn't prepared for the moral fallout. I feared we would drift from preventing disease to designing our children. We have crossed this Rubicon.

While the global community debates ethics and oversight, China is racing ahead with few restraints. Chinese scientists are editing the genes of animals — and even human embryos — not only to treat disease but to enhance traits such as intelligence and strength. Their goal appears to be the creation of

so-called superhumans. Without international standards and ethical guardrails, unchecked ambition in any one country can pose risks for all of humanity.

India must pay close attention. It has already misused reproductive technology: Ultrasound machines meant for foetal health monitoring were widely repurposed for sex selection. In Haryana, the sex ratio at birth has declined to 910 girls for

every 1,000 boys. In a society shaped by caste, colourism, and academic pressure, gene editing could easily be co-opted to entrench inequality under the banner of 'better features'.

But more than vigilance, India must lead. With a deep-rooted traditions of spiritualism, karma and ethics, and respect for human dignity, it is uniquely positioned to offer the moral leadership this moment demands. Its scientific community is world-class, and its track record — from generic medicine to vaccine equity — shows it can pair innovation with compassion.

The concerns extend far beyond reproduction. Gene-edited crops could marginalise small farmers if patented seeds are controlled by large corporations. CRISPR-based therapies, already costing more than \$500,000 in the West, could deepen biological inequality. Even gene drives, designed to eliminate diseases such as malaria, could threaten delicate ecosystems like the Sundarbans if not deployed with care.



Vivek Wadhwa



We now have a rare opportunity to prove that scientific progress and moral clarity can coexist, but the window is narrow.

SHUTTERSTOCK

To lead responsibly, India must act on four fronts.

First, accelerate research. Universities and public institutions should partner with socially responsible entrepreneurs to build local expertise in gene editing, synthetic biology, and bioethics. This collaboration can ensure innovation is aligned with the public interest and rooted in Indian values rather than imported priorities.

Second, access must be equitable. India has done this before with life-saving generic drugs and can do this again. Public funding and subsidies must ensure CRISPR therapies reach rural and tribal populations suffering from genetic disorders like thalassemia.

Third, the entire regulatory framework needs to be updated because existing biotech laws predate CRISPR. A new structure, co-created with scientists, ethicists, civil society, and patients, must define what is allowed, what is off-limits, and how oversight will function. Real engagement with the public, not just top-

down mandates, will be essential.

Fourth, India must lead globally. As it did in championing affordable vaccines, it can help shape international norms for genetic science, banning non-medical trait selection, regulating gene drives, and insisting on transparency and accountability. India can set the ethical benchmark, not merely follow it.

We now have a rare opportunity to prove that scientific progress and moral clarity can coexist, but the window is narrow. We cannot rely on Silicon Valley, where profit is the only true metric of success, nor on China, where State control and repression define scientific ambition. Both paths risk taking humanity into dangerous territory. The world needs a third way, rooted in spiritual values, ethical reasoning, and the belief that technology must serve the many, not just the powerful, and this is the role India must play.

Vivek Wadhwa is CEO, Wadhwa Bioventures. The views expressed are personal.

WVW

Skilling India for the skies

RAJEEV KAUL

India's aerospace manufacturing sector stands at an inflection point, poised for significant growth driven by the global civil aviation boom and the government's Make in India push to build a strong indigenous aerospace ecosystem.

With an estimated order book of over \$70 billion for the next decade, India is a key driver of growth in the global passenger aircraft market. It is only natural, then, that the country seeks to translate this into manufacturing gains. However, the persistent shortage of skilled talent is emerging as the biggest obstacle to realising this potential.

Aerospace manufacturing is a technically complex and highly regulated industry where precision, quality, and innovation are critical. It requires highly trained engineers and technicians with hands-on experience specific to aerospace manufacturing.

India produces over 1.5 million engineering graduates annually. However, the challenge lies in the limited alignment of their skills with the demands of aerospace manufacturing. This sector requires professionals who not only have general engineering skills but are also well-versed in aerospace standards such as AS9100 quality management, stringent tolerances, and aerospace material technologies. The gap between industry requirements and talent readiness underscores the critical need for focused skill development initiatives.

Several factors contribute to the talent gap. First, the niche nature of the aerospace industry means few academic programmes offer targeted curricula or vocational training aligned with industry needs. Second, the rapid pace of technology evolution leaves many engineers without exposure to emerging manufacturing techniques such as additive manufacturing and automation. Third, the retention of skilled talent is a challenge, as companies compete for a limited pool of resources.

According to industry estimates, India's aerospace manufacturing sector is expected to reach a valuation of around \$70 billion by 2030. To support this growth, an additional 150,000 to 200,000 skilled talents with aerospace domain expertise will be needed.

The Karnataka Aerospace & Defence Policy 2022-2027 also flags skill shortage as a key bottleneck. It outlines plans to develop aerospace parks with dedicated skill development centres and encourages participation from start-ups and MSMEs in nurtur-

ing the talent pipelines.

Despite the proliferation of engineering colleges, surveys show that fewer than 20% of programmes include aerospace manufacturing fundamentals in their syllabi. Moreover, opportunities for on-the-job training remain limited due to a lack of exposure to specialised aerospace technologies. These gaps result in higher training costs, delayed product development, and reduced competitiveness.

To address this, several companies have adopted proactive approaches — investing in in-house training, collaborating with technical institutes and launching apprenticeship programmes. These efforts are promising but remain scattered and insufficient in scale. To become a major aerospace manufacturing hub, India needs a broader, more coordinated effort. While the industry has tried to address this gap on its own, it is now imperative for the government to act as a force multiplier in creating a talent pipeline.

One of the core strategies should be to develop specialised training academies within aerospace manufacturing clusters. With an emphasis on hands-on training, these academies will have to integrate theory with live manufacturing experience to help create a pipeline of engineers and technicians ready to contribute from day one.

Government institutions and industry associations should collaborate to design curriculum and certification programmes tailored to the aerospace manufacturing sector's evolving needs. This approach should aim to build a skill base that is aligned with international aerospace quality and safety standards.

A third element is the adoption of technology-enabled learning platforms and upskilling initiatives. This will have to focus on training for emerging aerospace manufacturing technologies encompassing Industry 4.0 methodologies and futuristic materials and composites.

The talent shortage in aerospace should not be seen merely as a challenge but as a strategic opportunity. At a time when the aerospace talent in the West is ageing, India — with its young population and strong engineering education base — is uniquely positioned to fill the gap. The industry and the government can together elevate India's aerospace manufacturing sector by adopting a forward-looking, ecosystem-driven approach.

(The writer is the managing director of a high-precision manufacturing company in the aerospace industry)

Education Crossroads

For decades, the United States has represented the ultimate academic and professional frontier for Indian students. From technology to medicine, and from journalism to data science, generations of Indians have crossed the oceans to seek knowledge, skills, and opportunities that remain scarce in India's overstretched higher education system. But recent shifts in US visa policy are forcing many aspirants to question this long-cherished pathway — and perhaps, for the first time in a generation, to look seriously elsewhere. The latest suspension of student visa appointments and tightening of entry conditions are not mere procedural hiccups. They reflect a deeper, more unsettling pattern: rising unpredictability in US immigration and education policy that treats international students — and by extension, India's brightest young minds — as expendable variables in domestic political games. For Indian students who invest years of preparation, lakhs — sometimes crores — of rupees, and career dreams into their American plans, this uncertainty is not merely stressful; it is destabilising. Parents, consultants, and students alike now whisper the same uncomfortable thought: is the US no longer a safe bet? When acceptance into a top university no longer guarantees entry into the country, when social media histories are probed as potential threats, when mid-course deportations are plausible risks — the allure of the "American dream" dims. The hesitation is showing up in real numbers. Education counsellors report sharp drops in applications, and countries like the UK, Germany, Ireland, and Australia are quietly benefitting from this redirected flow of global talent. For India, this moment offers both danger and opportunity. The danger lies in the disruption of a pipeline that has fed its global tech diaspora and supplied remittances, skills, and soft power. If the US no longer welcomes Indian students in large numbers, it may crimp the prospects of thousands who planned for STEM careers or nurtured Silicon Valley dreams. But the opportunity — if India dares to seize it — is to make urgent reforms in its own higher education system.

India has the demographic advantage, the ambition, and the need to become a credible global education hub. Yet quality remains concentrated in a handful of IITs and IIMs, with limited research infrastructure and international exposure elsewhere. If the government and private sector view this US visa turmoil as a wake-up call, there is a chance to retain top talent at home — through better funding, global faculty partnerships, world-class labs, and flexible curricula. In the end, the US may find that its self-defeating policies have accelerated the global redistribution of talent. But India, too, must decide: will it passively watch its students seek Plan B abroad, or build the future where they can thrive at home? This moment of flux, provoked by the whimsy of an American administration, is rare — and decisive. The question is not where students will go next. It is whether India can finally become the place they want to stay.



A new life for Nalanda: Reviving its old glory?



Claude Arpi

A recent visit to Nalanda and Rajagriha (modern Rajgir) has been a reminder about the level of knowledge, vitality and spirituality of Ancient India. While visiting the old ruins or climbing one of the Buddha's favourite teaching spots, the "Gridhrakuta" (or Vulture Peak), many thoughts came to mind.

A place like the Vulture Peak seems to have preserved the peace and serenity that a man captured more than 2,500 years ago. How is it possible? This man did not have access to the Internet, no newspapers or social media, but he nevertheless brought a revolution in the minds of hundreds of millions worldwide and his atmosphere still pervades the place today, attracting lakhs of seekers, devotees or pilgrims. This phenomenon is not easy to grasp for our modern minds. Another question: Will humanity have taken a step forward when in a few years after Artificial Intelligence invades all aspects of our lives? In my view, it may not.

Something which has always fascinated me is how the vigour of the Buddhist monastic life shifted from the hot plains of India to the desolate caves and gompas of the Tibetan plateau. Most of the architects of this move were from Nalanda Mahavihara, including Atisha Dipankara (862-1064 CE), a former abbot.

The Muslim invasion of northern India marked the end of the last remnants of Buddhism in the land of its birth: "Individuals, or even small sects, directly or indirectly professing the religion, might be found in the country for centuries to come, and may be said to exist even now, but Buddhism as a force in society vanished from India since 1200 AD, never to return," wrote the great historian R.C. Majumdar.

During my visit, the image of a Tibetan monk, Dharmasvamin, who visited Nalanda in 1235, was in my mind. In the mahavihara, he saw only destruction; he could not recover a single manuscript from what was once the richest library in the world. Finally, the Tibetan met an old monk in his 90s who could teach him Sanskrit. Dharmasvamin studied for some time with the old man, but as the Muslim troops were approaching again, he carried his old master on his shoulders and hid until the raiders had gone. The old monk on the shoulders of this Tibetan chieftain symbolises the end of an era; Nalanda, the source of knowledge, had gone dry, though the cultural influence of India over Tibet continued to flourish for centuries.

According to archaeological discoveries, the first university (vihara) was probably founded after 400 CE. In his memoirs, the Chinese pilgrim Fa Xian (399-412 CE) visited the area around Rajagriha looking for Buddhist texts; though he spent 10 years in India, visiting all major Buddhist pilgrimage sites, including the Nalanda area, he never mentioned the Nalanda monastery, which probably started to exist in its institutional form only in the fifth century. The monastery is said to have been founded by the Gupta emperors a few years after Fa Xian's visit; during the next seven centuries, it greatly expanded and its fame spread to the entire world. A seal identifies a monarch named Shakraditya (416-455 CE) as the founder, attributing the first sangharama (monastery) to him; this was later corroborated by the Chinese pilgrim Xuanzang.

Though some historians believe that great scholars like Nagarjuna (1st-3rd century CE), the foremost thinker in Mahayana Buddhism, or Aryadeva (3rd

Aiming to have 900 students by the end of the year, Prof. Sachin Chaturvedi explained that the university was in a 'take-off mode, though 99 per cent of the construction work has been completed'

century CE) studied in Nalanda, it is not certain that Nalanda was a full-fledged vihara until the fifth century. Being the largest centre of knowledge in North India and with many small viharas affiliated to Nalanda, later it became known as Nalanda Mahavihara.

Abhay K., an author and diplomat, recently wrote a book, *Nalanda: How It Changed the World*, and the Mahavihara's influence is undeniable.

While walking through the ruins of the ancient university, it is striking that its apogee, this institution could support up to 10,000 monks; this is thanks to the steadfast and powerful patronage from the local kings (and the hundreds of villages around). One can surmise that Nalanda survived because the patrons had the wisdom to leave the organisation to wise monks who managed the affairs of the Mahavihara; the governance of the wise allowed the ancient "Indian spirit" to flourish for centuries.

Sri Aurobindo, the modern rishi, wrote: "When we look at the past of India, what strikes us next is her stupendous vitality, her inexhaustible power of life and joy of life, her almost unimaginably prolific creativeness... She has been creating abundantly and incessantly, lavishly, with an inexhaustible many-sidedness, republics and kingdoms and empires, philosophies and cosmogonies and sciences and creeds and arts and poems and all kinds of monuments, palaces and temples and public works, communities and societies and religious orders, laws and codes and rituals, physical sciences, psychic sciences, systems of yoga, systems of politics and administration, arts spiritual, arts worldly,

trades, industries, fine crafts." Indeed, the Mahavihara was part of an eco-system. Can it be replicated today? It is doubtful, with the strong tendency (one could say compulsion) from governments (both Central and local) to manage everything, but knowledge and spirituality cannot depend (or survive) only on government grants or schemes. The revival of the ancient university is certainly an interesting experiment attempted by the Central government, but can it succeed?

Among some positive aspects, the Bihar government had given almost 500 acres of land and the connectivity with Patna and Gaya has now improved. I must say that I was quite impressed by the new campus. Unfortunately, only some 500 students have enrolled so far and not many from far-away foreign countries. Recently an economist,

Sachin Chaturvedi, has taken charge as the vice-chancellor of Nalanda University. Aiming to have 900 students by the end of the year, Prof. Chaturvedi explained that the university was in a "take-off mode, though 99 per cent of the construction work has been completed".

The project is run by the external affairs ministry, which would like to attract more students and faculty from world over. "Nalanda will give the message of peace and promote more rigorous research to connect Indian philosophy with the contemporary world," said Prof. Chaturvedi.

But today, where are the Dharmakirtis, the Shantidevas, the Santarakshitas or the Atishas? Even if they exist, can they survive or blossom in a governmental framework? Further, as the singer said: "The times, they are a-changin'." Humanity's inclinations are not the same today as they were twelve centuries ago. The success of New Nalanda will depend on all these factors.

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Trump takes aim at Ivy League

In a controversial campaign, President Donald Trump has launched an aggressive offensive against America's most prestigious universities, particularly Ivy League institutions, through funding cuts, policy investigations, and harsh rhetoric.

US President Donald Trump has targeted top US universities during his second term. He has been waging a war on Ivy League universities for the past few weeks. He has particularly targeted institutions such as Harvard, Yale, Princeton, Columbia, Cornell, Brown, Dartmouth, and the University of Pennsylvania.

This move has shocked the American higher education system. Academia now faces a significant challenge fighting against the administration. Trump's attacks also have a political dimension. They are viewed as a conservative strategy to reduce the influence of liberalism in higher education. They could be aimed at eroding the Democratic Party's traditional support base.

The affected universities, which include those with funding cuts, are located in areas where the Democrats received strong support. Many of these institutions are now facing funding cuts and grant restrictions, which have significantly impacted their research and educational programmes. Conservatives have often complained about a bias in these institutions. Some view that these are part of the Trump administration's effort to reshape higher education.

One speculation is that Trump harbours resentment towards Ivy League schools for not granting him an honorary degree or inviting him to speak at graduation, despite his graduation from the Wharton School. Most recent American presidents have graduated from Ivy League universities, including Trump, who attended the Wharton School of the University of Pennsylvania.

In the first few months of 2024, the Trump administration has moved aggressively to strip federal funding from prominent colleges and universities. On March 10, the administration took action against Harvard, Columbia, NYU, and 60 other institutions. It also started investigations into possible violations of the Civil Rights Act due to incidents of antisemitic harassment. More than \$10 billion in research grants have been cut.

Immigration and Customs Enforcement has apprehended student activists. International students are not eligible for admission to Harvard, which also risks losing its tax exemption status. Trump has also banned international students from attending Harvard.

Harvard risks losing its tax-exempt status. These actions have raised tensions



KALYANI SHANKAR

among Ivy League universities. Many universities initially chose to adhere to Trump's policies. They have agreed to enhance on-campus security and also allow oversight in some specific departments. Columbia has been warned that failing to address antisemitic harassment incidents adequately could jeopardise its accreditation. Princeton University and the University of Pennsylvania

have also suspended hundreds of millions in research grants. The Department of Education is investigating ten universities for alleged antisemitism and has warned others that similar inquiries may occur. Furthermore, it is examining 52 universities for illegal race-based projects.

Trump has introduced new guidelines aimed at limiting international student admissions, including a cap on visas, and he has publicly criticised Harvard, stating, "Harvard needs to behave itself."

The confrontation marked a dramatic battle between Harvard, America's oldest

and wealthiest University, and the president, Donald Trump. "Everyone knows that Harvard has lost its way," Trump posted in X. "Harvard is a JOKE, teaches Hate and Stupidity, and should no longer receive Federal Funds."

Harvard is hard hit both financially and otherwise. They include funding cuts and agreeing to follow new federal oversight rules, including scrutiny of curricula, admissions, and research priorities. Taking legal action, Harvard has initiated court proceedings and received temporary relief when a federal judge suspended the policy that restricted international students from obtaining visas.

As to the reason for Trump targeting the Ivy League institutions, the administration has offered various explanations. Some believe that during the 2024 Presidential campaign, Trump pledged to cut funding and accreditation for colleges that propagate "antisemitic propaganda."

After he returned to the White House in 2024, Trump launched a campaign targeting Ivy League schools. The White House says this campaign was prompted by concerns that these schools are not doing enough to deal with antisemitism on their campuses.

This concern has grown due to the anti-Israel protests at US universities since the Gaza conflict escalated. It is unclear how long the Trump versus Academia confrontation will continue. It all depends on how long the affected institutions can withstand the pressure. Will it fight back or comply with the White House? Even if the targeted universities refuse to change their policies soon, some will start changing on their own. For example, Michigan, Ohio State, and the University of California have already made changes, and more to follow.

International students hoping to join these elite institutions now face uncertainty and must consider alternatives in other countries. They contribute vast amounts of dollars mainly to the US economy. Some are considering universities in other countries as alternatives. It is said that it takes years to build an institution but only moments to tear one down. The conflict is escalating, and the affected universities may pursue more legal avenues. If it continues, American universities may lose talent, even as the Trump administration doubles down on its actions.

(The writer is a popular columnist. Views are personal)

Pidil

Road to entrepreneurial success

TRIBENI SAIKIA

Entrepreneurial ecosystem of Assam supports impact-driven ventures.

Entrepreneurship is a transformative journey where an idea evolves into reality through vision, determination, and consistent execution. It generates employment and reduces dependence on government jobs, empowering individuals to become financially independent. Entrepreneurs foster healthy market competition, leading to better quality, affordability, and customer satisfaction. This boosts regional GDP and economic efficiency. Entrepreneurship encourages innovation, providing creative solutions to societal problems through new technologies and approaches. A vibrant entrepreneurial ecosystem prevents monopoly and supports a diverse, competitive market.

Entrepreneurs face many challenges particularly in case of securing working capital, navigating fierce competition, managing inconsistent cash flow especially in preliminary stages, hiring and retaining skilled staff, adhering to legal and tax regulations, marketing and supply chain issues, establishing credibility, building a brand, earning customer trust, scaling a business without quality loss, keeping up with digital evolution, coping with uncertainty, etc.

Assam is witnessing a rapidly growing entrepreneurial ecosystem that offers tremendous opportunities for success and impact. Contemporary entrepreneurs of Assam have access to diverse funding sources such as angel investors, venture capital, and crowdfunding platforms. Government-backed schemes like MUDRA, PMEGP, and Startup India Seed Fund provide crucial financial support. Sector-specific funds in areas like agritech, fintech, cleantech, and healthtech are also investing in high-potential startups. Assam is observing a spike in incubation support programmes for new endeavours. Key enablers include Assam Startup - The Nest, Startup India and Stand-Up India, Swavalamban Yojana (SIDBI), IIT Guwahati Technology Incubation Centre, Assam Agricultural University and Tezpur University incubators, Northeast Startup Incubators, etc. Infrastructure development programmes are being implemented under the Assam Industrial Development Corporation (AIDC) such as Integrated Infrastructure Development Centre, Mega Food Park (Chhaygaon), Export Promotion Industrial Park, Bamboo Technology Park (Chhaygaon), Plastic Park Scheme (Gelapukhuri, Tinsukia), Jute Technology Mission (Dhing, Nagaon) and so on.

The Uttar Poorva Transformative Industrialization Scheme, 2024 is providing incentives and support to industries. The Multi-Modal Logistics Park at Jogighopa aims to enhance cargo movement and reduce logistics cost. The Advantage Assam 2.0 and Rising North East Investors Summit aimed to attract investors and boost industrialisation. The Assam Industrial Policy 2019 offers incentives, and infrastructure support enabling entrepreneurs to grow. Digital market can be

accessed under the Government e-Marketplace, Digital India and BharatNet, Assam Startup and Innovation Policy 2025. The Assam Skill Development Mission, Bonjee scheme, Biponi scheme aim to nurture the entrepreneurial ecosystem. Sector-specific entities like NEDFi, SIDBI, NABARD, NER-AMAC, Khadi and Village Industries Commission, National Small Industries Corporation Ltd encourage entrepreneurs. Schemes like the Chief Minister's Startup Fund, Assam Agripreneurs' Development Scheme, and networks such as TiE Guwahati and Startup Grind provide guidance and mentorship. Startups recognized by the Department for Promotion of Industry and Internal Trade benefit from tax exemptions, simplified compliance processes, and fast-track patent filing, which significantly ease the burden on early-stage enterprises. Emerging technologies like AI, IoT, blockchain, and automation tools are now more accessible, lowering entry barriers and opening doors for innovative solutions. The rise of digital adoption in sectors such as e-commerce, health, finance, and education is fuelling a growing demand for innovative products and services. The entrepreneurial ecosystem of Assam increasingly supports sustainable and impact-driven ventures, as waste management, climate change, clean energy and semiconductor. Cross-border e-commerce, SaaS exports, and international collaborations have enabled startups to scale beyond regional boundaries.

Both the Central and State governments encourage youth to consider entrepreneurship as a viable career path. However, before embarking on this journey, aspiring entrepreneurs must do their homework to build a sustainable and impactful business venture. To generate a business idea, they should first identify gaps or unmet needs of society that will help them address real-world problems, increasing the relevance and potential success of their ventures. Understanding of market demand, customer behaviour, preferences, buying patterns, and purchasing capacity should be top priority for any entrepreneur. To gain these insights, field surveys, interviews, and focus groups can be highly effective. Competitor analysis enables them to innovate and implement better solutions within their own ventures. It aids to identify areas where current players are underperforming. Leveraging new technologies is essential for modern entrepreneurship. After finalisation of a business idea, it is important to validate it through pilot projects or prototypes. Collecting feedback helps assess the feasibility and effectiveness of the product or service before a full-scale launch. Lastly, personal interest and expertise should not be overlooked. Entrepreneurs are more likely to succeed when their ventures align with their hobbies, skills, passions, and professional experience. AT/15/6

K. Jothan

The essays in *Perumal Murugan's Students Sketches in Memory* (translated from the Tamil by V. Jeyaraj) first appeared in 2017 as part of a weekly column in the *Vetrikkottu* supplement of the *Hindu* (Sri Lanka). Contrary to the meaning of *Vetrikkottu* (flag of victory), Murugan's stories about the students he taught during his three decades as a government college Tamil teacher in *Athar* weren't always success stories. "As a teacher, my attention is not always on those who have done well," writes Murugan and we warm up to him instantly.

The side most people know of Murugan is the writerly one but follow his work closely and you will see that this self is firmly rooted in his experiential world. As a free thinker who has taught Tamil to first-generation learners in rural India, Murugan comes face-to-face with an educational system choked by an oppressive and feudal worldview, caste-class inequities, and unexamined pedagogical practices.

Young heroes

The essays in this book, ably translated by Jeyaraj, are heart-warming, poignant sketches of Murugan's students. Through his stories of their exploits, a picture emerges of Murugan himself, of a teacher who is warm, generous, compassionate and thoughtful. Murugan holds that the work of a teacher does not end with the classroom but rather, that it must extend even to the inner lives of students. He is a teacher who is constantly learning how to be one.

There is not a trace of self-consciousness or self-glorification in the essays.



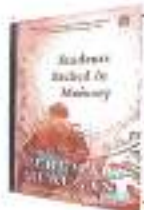
Perumal Murugan: Campus portraits

The writer's poignant sketches about his teaching experience are a must-read for both students and educators

Murugan tells it like it is. This is what makes the book such a wonderfully engaging memoir.

Reading the essays is an immersive experience and we meet some of Murugan's most interesting students. The list is long: Manaviksha, a female student who decides to stand for student union elections but is forced to back out; the brilliant Kakichehvi who presents a critical paper on the Mahabharata and ends up earning the wrath of a professor for being too bold; Sathishar who lives in Murugan's house for some time and loves to cook; Kananam who, prompted by Murugan, starts

reading fiction; Prabhu who has a quirky habit; Chinnaadurai the amazing performer who stages an appeal as part of a college competition; Rufian Ram who turns out to be a poet and a talented kabuki player; Ram who has a green thumb; the mischievous Rajkumar who ultimately pipes down; Ramji who looks a bundle for Murugan's daughter; Sarala who ends up as a police constable in Valparaiso; the handsome Rameshram who ultimately commits suicide because of failure in love; the dynamic Venkatarachalam who is the joint secretary of the literary forum; the astute



Students Sketches in Memory
Perumal Murugan, tr.
V. Jeyaraj
Harvilld
\$39.95

Prabhakaran and his gang whom Murugan eventually wins over; Nandikannur who battles on protesting before Murugan; Sarash from Joravadi hills who has political ambitions; the hot-flipping Sankararam; cycle Soori; parava master Gopalakrishnan; Kozhik, the barber who cuts Murugan's hair when the latter is under house arrest; and research scholar Senthilvan whom Murugan mentors.

The tyranny of English
Through his finely etched portraits,

Author Perumal Murugan, and (left) students at IWH Government Arts & Science College for Women in Sindigudi, in north-western



Murugan raises some fundamental and difficult questions. How does one teach and learn in an environment which is deeply feudal, so much so that students and their parents hesitate to sit in the presence of professors? How does one respond to class inequality and income inequities? (Many of Murugan's students work day jobs to support themselves and their families.) What work-ethics can one employ in the face of outdated curricula and pedagogical methods? How does one replace the old system of disciplining and punishing students with a new one based on respect and love?

Murugan draws our attention to the tyranny that is English when it comes to first-generation learners from rural, small towns Tamil Nadu. He recounts stories of students who clear all their papers but are held back only on account of the English paper. He also writes of the difficulty he faces when it comes to female students. Unlike in the case of male students, Murugan must keep a distance from them because of social dictates and so cannot mentor them

to the extent he would like to. He also critiques the corrupt practice of research students buying their degrees.

Making learning contemporary
Murugan argues that while students need to be introduced to ancient Tamil writings, they should primarily be exposed to writings that engage with our own times and in ways that are accessible to them. He is happy, he writes, to share soft copies of reading materials over WhatsApp so that his students have easy access to them. His vision is that of an environment where students feel free to ask questions, where their individual talents are encouraged.

He stresses the importance of skill training and practical exposure. At one point, Murugan reflects on how the privilege he enjoys of a government job and a steady income results in his rebuking a parent who, unable to afford the college fee of 6000, delays his son's enrolment. Equally engaging are his reflections on the importance of fashion and romance in the lives of his students and the importance of preserving their innate joy and exuberance.

What I found especially striking about these essays is the fact that Murugan narrates both "success" stories as well as "tragic" stories and stories of "failure". Reading *Students Sketches in Memory* is an exercise in understanding the nature of privilege and how this plays out in the field of education. Funny, quirky, courageous and resilient, the young people in Murugan's portraits shine with their own light.

The reviewer is a poet, translator and academic; her forthcoming work is a book of poems, footnotes to the Mahabharata.
H/S/MS

The Telegraph

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LOVE AND DEMONS

Love is blind. Is this why Delhi University is trying to open the eyes of those in love? The university is launching a general elective course titled 'Negotiating Intimate Relationships', which aims to help young people deal with romance, friendship, jealousy, heartbreak and so on. While a university course on romance may seem like an odd idea, the logic behind starting this course is not trivial. The university felt that the rising cases of crimes among teenagers and young adults in relationships prompted by jealousy warrant such an intervention. The instances cited by Delhi University are indeed concerning. This year alone, 21-year-old Komal, 19-year-old Vijaylaxmi and 18-year-old Mehek were all brutally murdered by their partners in fits of jealousy and, in 2022, 27-year-old Shraddha Walkar was killed and dismembered by her live-in partner. In fact, love affairs with bitter endings were the third-biggest triggers of murders in India in 2022, according to the National Crime Records Bureau. In light of this, young Indians perhaps do need lessons in how to negotiate relationships and heartbreaks in these modern, complex times.

Yet, murderous partners are not the only peril faced by lovers in India. Be it the family or the State, caste, religion or gender, the barriers that love has to cross in a country as stratified as this are numerous. So a course that proposes to teach youngsters about relationship red flags needs to be sensitive to not just crime but also the other impediments to love. Consider the shocking case of Sonam Raghuwanshi

Delhi University has proposed a course on intimate relationships and red flags. Love's real challenges must be identified

that now has India in thrall; she has been accused of murdering her husband after she was forced into a marriage with him because the man she loved belonged to a different caste. No less than the chief justice of India has pointed out in the past that hundreds of couples are killed each year for marrying outside their caste. A university course on intimate relationships thus cannot afford to ignore hostile families and communities — the consequence of embedded social differences — when it comes to conceiving of a course on intimacy and its challenges. Moreover, the personal, as always, is political. Academic deliberations on love need to acknowledge the culpability

of the State and its institutions. Although protection to interfaith and inter-caste couples is mandated by law, there are numerous instances of the police and even the court turning down pleas for help from such star-crossed lovers.

And what of the Othering of love through many intrusions? Same-sex couples and their intimacies still await legal recognition. The bogey of love *jihad* — even though the government has admitted in Parliament that there is no data to support this phenomenon — is being used to demonise interfaith unions. Gujarat and Uttar Pradesh even have laws to prohibit love *jihad*. Uttarakhand, meanwhile, has demanded that live-in partners register themselves with the authorities in a blatant violation of their privacy.

Delhi University's proposed course on love is timely and welcome. But it must acknowledge the existence of the many demons love faces in India. ✓

Yes, JEE! IITs are closing the gender gap, but there's still a long road ahead

BY INVITATION

RAVINDER KAUR



IITs continue to remain at the centre of the middle-class dream of pride and prosperity. But for many years,

female students were left on the margins of this aspiration. While the 2025 results underline the continued dominance of males in engineering (82.7% of the total qualifying students in 2025), the record pass percentage of girls this year shows that a lot has changed since 2018 when IITs introduced an affirmative action scheme by adding extra seats for girls.

Seven years ago, the situation was dire with women constituting a shockingly low 8% in the BTech degree, a number that had stayed stagnant over the nearly 60+ years of the existence of first-generation IITs. Nobody found anything odd about this since engineering was coded 'male' until Prof Timothy Gonsalves, former director of IIT Mandi, took matters in hand and piloted the scheme known as the 'Supernumerary Seats Scheme' (SSS). The evidence to convince the IITs Council that the scheme was necessary and would not lead to a "dilution" in the quality of students, came from two sources: JEE data showing that many women who qualified did not join IITs for varying reasons such as getting admission to 'male' branches like civil and mechanical, and parental concerns about safety and distance from home. Girls had little choice in their admission, as we found out in the first open house held in 2018 at IIT Delhi for JEE Advanced qualified girls and their parents. The second source was a 2016 IIT Delhi study that showed that irrespective of the JEE rank they entered with, female students outperformed their male peers.

It is intriguing that only the IITs have been plagued by the extremely low percentage of female students in engineering; the national average is around 30%. Southern states had already initiated a

33% reservation for girls in the 2000s. So, ironically, it's the so-called Institutes of National Importance (INIs), the IITs, that barred women from their portals, reifying the image of elite engineering as a male preserve, in the process depriving not only STEM of diverse perspectives on research and innovation but also women of stellar role models and networks that the IITs generate. Female faculty numbers in these institutions also remain low – a story for another time.

The SSS scheme has been successful on several fronts. It has met its stated target of raising the percentage of girls to 20% by 2020, which improved to 22% in 2024. There are important wins to be noted here. A perusal of JEE data shows that the number of women appearing for JEE



FULL STEM AHEAD: Not only are more girls qualifying for IITs and getting seats, even those who come at lower JEE ranks catch up with male peers at graduation

Advanced has risen by 33% between 2018 and 2025. More critical indicators of the scheme's success are the percentages of those who qualify and those who get a seat allotted. Prior to SSS, females represented 12% of all (males and females) who qualified and 9% of those who were allotted seats. Post-SSS, the percentage of women allotted seats had more than doubled to 19.8% in 2024. The rate of growth of seats allotted increased from -1.4% per year between 2011-17 to 4.1% between 2018-24.

The rising percentage of women al-

lotted seats since 2018 is a function of the extra seats as well as girls being able to meet their preferred choices of institute and department, resulting in rising acceptance rates. This stemmed the drift away to an NIT or an engineering college near home. Further good news, as recent work by STEMtheGap, a research project housed at IIT Delhi, shows, is that even if some supernumerary girls enter IITs at somewhat lower JEE scores and ranks, they catch up with their male peers and perform similarly while exiting the program.

How successful has the scheme been in opening the doors to engineering as an educational and career choice for young women? Our qualitative studies with girls who entered IIT Delhi post-SSS show that families across caste categories are factoring in women's higher chances of getting into an IIT, as are schoolteachers and coaching centres. The additional girls have changed the feel of IIT campuses, resulting in a more welcoming environment and less isolation. Since the scheme also ensures that every department reaches 20% representation, it prevents the bias caused by the clustering of women in 'lower-ranked' departments. The scheme also follows mandated caste reservations, thereby addressing gender imbalances within caste categories. The scheme has thus increased both gender and caste diversity in IITs, apart from breaking disciplinary stereotypes within engineering.

To further increase the female pipeline for IITs, it is important to initiate measures that address deep-rooted biases about girls' and women's inherent STEM abilities and remove structural barriers built into entrance exams; such steps can help reshape the environment for inclusion. Further, initiatives like open houses and mentorship programs, which bring schoolgirls to IIT campuses for an immersive experience, are also key to changing the mindset that women are unsuited to engineering. ■

Kaur is professor, IIT Delhi and co-lead on STEMtheGap research project

Soft skills: Missing link in education

DR NAMRATA GOGOI

Empowering students with soft skills alongside academic knowledge is vital to building a resilient, communicative and future-ready generation.

Despite producing academically brilliant students, our education system often falls short in preparing young individuals for real-world demands. Across campuses and workplaces in Assam and beyond, it is not uncommon to find graduates who can solve complex problems yet falter in group discussions, struggle to collaborate, or fail to express their ideas and regulate their emotions. This paradox raises an important question: Are we equipping students with the right tools to thrive beyond textbooks?

Each year, India produces a large pool of graduates, yet, according to the India Skills Report 2024, only about half are employable. The gap does not lie in technical knowledge, but in soft skills – communication, teamwork, adaptability, and emotional intelligence. While for a few these qualities are innate, for the majority, they must be consciously nurtured and developed over time. Therefore, it is time to recognise that soft skills are as crucial as academic knowledge and must be thoughtfully integrated into the mainstream curriculum.

Soft skills are not just buzzwords; they are essential for personal and professional growth. As automation replaces routine tasks and artificial intelligence reshapes complex roles, human-centric skills have become even more critical than before. The ability to communicate clearly, empathise, collaborate, adapt, etc., determines how well an individual can thrive. According to LinkedIn's Global Talent Trends Report 2023, 89% of recruiters say that when a hire fails, it is usually due to a lack of soft skills, not technical expertise.

The World Economic Forum's *Future of*

Jobs Report echoes this, listing top skills for the future: analytical thinking, critical thinking, resilience, adaptability, curiosity, technological literacy, dependability, empathy, active listening, and leadership.

Despite their proven importance, soft skills in India remain an afterthought in formal education. Most schools and colleges still prioritise hard skills – subject knowledge, exam performance, and technical expertise – while overlooking the broader competencies students need to flourish. Soft skills are often confined to occasional workshops, guest lectures, or short-term certificate programmes.

This fragmented approach fails to create lasting change. Just as mathematics or science is taught systematically over years, soft skills too require consistent practice, mentoring, and feedback. Integrating them meaningfully into the curriculum ensures students internalise these abilities rather than learn them temporarily.

The National Education Policy (NEP) 2020 hints at this shift, emphasising holistic and multidisciplinary education, critical thinking, and communication skills. However, while discussions continue around integrating soft skills at the higher education level, one must ask – why wait so long? If communication, empathy, collaboration, and adaptability are foundational to success, should we not begin nurturing them much earlier?

In Finland, education emphasises not just academic excellence but the development of social, emotional, and collaborative skills from an early age. Students learn to work in groups, express opinions respectfully, and resolve conflicts thoughtfully – preparing them for real-world human interactions as much as for

examinations. In Denmark, emotional literacy and social skills are embedded so deeply that the first six months of school focus solely on building empathy, democratic dialogue, and problem-solving. In these countries, teaching soft skills is considered as essential as teaching mathematics or literature.

Several Asian countries offer equally inspiring examples. Singapore has moved beyond an exam-centric model to emphasise holistic development. Character and Citizenship Education lessons now build teamwork, emotional regulation, resilience, decision-making, and communication skills. In Japan, the concept of *Shin Chikara* or 'Zest for Living' shapes policies that foster emotional resilience, independent thinking, and collaboration from the early years.

These countries do not leave soft skill development to chance. In Finland, continuous teacher observations, peer assessments, and project-based evaluations gauge communication, collaboration, and problem-solving abilities. Singapore's Holistic Development Profile provides structured feedback on students' social-emotional growth; Japan similarly relies on teacher evaluations to monitor students' social behaviour, emotional strength, and interpersonal skills.

This global shift is a clear indicator of the fact that soft skills should be systematically integrated into education. It is no longer an option but a prerequisite for future readiness, especially for Gen Z, a generation praised for being tech-savvy and entrepreneurial but frequently lacking in social skills. This generation struggles to manage relationships and deal with setbacks because it grew up in a fast-paced digital world. Equip-

ping them with soft skills will help them deal with life's uncertainties with maturity and confidence, both at the personal and professional levels, not just in the job market.

Teachers play a crucial role in this transformation. They must be able to identify students whose emotional literacy needs strengthening and create classroom environments where feelings can be discussed openly. While academic competency in subjects like maths and reading remains important, fostering these skills must become a core teaching priority. Confident, self-aware, and emotionally resilient children are more likely to excel academically as well.

The NEP 2020 stresses the inclusion of soft skills in education. However, whether they will be given adequate weight in curriculum design remains unclear. The need is to implement soft skills education as a comprehensive, credited course bridging the gap between academic learning and industry readiness. Modules could cover communication strategies, critical and analytical thinking, leadership, social influence, inclusivity, and community outreach. Experiential methods such as case studies, internships, role plays and reflective projects should become the backbone of this approach.

It is imperative to move beyond the outdated divide between 'hard' and 'soft' skills. Education must evolve to nurture the whole individual – mind, heart, and voice. Assam, with its rich educational roots and vibrant youth, has the opportunity to set an example for the rest of the country. The time to act is now.

(The author is an Assistant Professor and certified soft skills trainer)

NRIC/4

K. Flango

Language teaching must be distinct from the teaching of subjects like Maths, Physics, or Economics. Yet, current practices rarely reflect any such distinction, especially at school level. Language syllabuses outline ambitious objectives and learning outcomes such as to enable learners to become fluent and flawless users and to empower them to be 'autonomous' by mastering the language. They also aim to equip them to employ the language effectively and naturally in both formal and informal contexts. However, at the initial stages (Levels 1 and 2), the basic objective is imparting foundational skills and, by level 3, learners are expected to have acquired the core linguistic skills: listening, speaking, reading, and writing (LSRW).

Reality today

However, the reality of today's teaching-learning ecosystem tells us a different story, raising certain poignant questions: If learners have acquired the basic skills, why do teachers continue to re-teach them at higher levels? Why aren't they letting learners expand on their own to refine the acquired skills? Isn't the classroom engagement actually stifling their cognitive development by overemphasising teacher-led instructions? Why do

Let learners learn

Apart from focusing on specific skills, English classes need to break away from the teacher-centric models and foster independent learning among students



teachers, even at the advanced stages, read texts aloud and explicate them, instead of guiding learners to explore on their own? Shouldn't class time be devoted to acquainting learners with diverse reading texts and strategies to optimise their efforts?

To materialise the star-

ed objectives of teaching-learning of English, overhauling of the curriculum is a necessity. The first two of LSRW are innate human abilities, while the other two are acquired skills with reading typically preceding writing. As literacy fundamentally begins with reading, it demands prioritised atten-

tion. Instead of labelling classes generically as 'English', timetables should specify the skills being dealt with. Signalling the shift, on each day, a period should be earmarked for a particular skill. Of the five periods in a week, two should be dedicated for Reading, as it is the 'mother of all skills', and

one each can be dedicated to Listening, Speaking and Writing.

Moreover, reading classes must break free from the dated teacher-centric models. Learners should actively engage in varied activities to turn the grandiose plan of learner-centric and learner-driven approaches a reali-

ty. This approach will foster 'independence' by shifting them away from teacher dependence. The role of a teacher should be restricted to organising 'tasks' – designing and organising activities in diverse formats such as individual, in pairs, triads, and small groups – ensuring inclusive participation of all.

Wide range

J.K. Rowling once remarked, "If you are not interested in reading, you have not found the right book". In a class of 30 or 40 students, no single text can appeal to all; hence, various kinds must be utilised. This requires an alternative syllabus construction, i.e., inclusion of 'seen' and 'unseen' texts. The 'seen' could be prescribed, but the 'unseen' should be identified by teachers and anchored on students' interests and needs, a practice adopted in progressive institutions. Texts can span both fiction and non-fiction across multiple genres. Fiction, for instance, holds romance, mystery, horror, fantasy, sci-fi, and thrillers; similarly, non-fiction ranges from autobiographies, biographies, self-help, and travelogues, spiritual to scientific writings. Familiarity with this wide variety can facilitate learners to choose whatever interests them.

Adults in their 40s and 50s confess that they may have read about 500 books, mostly during their

school and college days. This establishes the criticality of student days, for what they were to become later in their lives. Reading, after all, is not just decoding but also involves comprehension, reflection and imagination, which enables them to be thinkers. So, to maximise their efforts, besides the text types, they must be introduced to strategies such as skimming, scanning, previewing, predicting, questioning, and inferring. Mastery of these will accelerate the reading of more books with less time. For slogans such as 'job-ready', 'future-ready', or prepare for 'non-existent jobs', reading skills are the true foundation. 'Read to lead, and lead to read' is the maxim.

As language is for communicative purposes, 'noisy classes' are the norm. So, the clichéd ideal of 'ptn-drop silence' must be militated against. The censure of inability to acquire English is not owing to learners' incapacity, but systemic shortcomings. The question remains: Are we truly ready to handle English courses differently? Subjects can be learnt through textbooks, but language demands efforts beyond textbooks, beyond teacher and classroom. The more one reads, the better they become.

The writer is a retired Professor of English and Chief Executive Chair of the English Language Teachers' Association of India.

LETTI IMAGES/GETTY IMAGES

Empowering State Public Universities to Power the Vision of Viksit Bharat

BY VK PAUL, SHASHANK SHAH AND OSHIN DHARAP

India is home to the second largest higher education ecosystem in the world, with 4.33 crore students and nearly 15 lakh faculty across 1,168 Universities, 45,473 Colleges and 12,002 Standalone Institutions. While 'Institutions of National Importance' and 'Central Universities' have made their mark in frontier areas of knowledge and dominate national priorities, it is the nearly 500 State Public Universities (SPUs) and their over 46,000 affiliated institutions that are the backbone of its higher education system. They currently cater to over 80 per cent of students. Technically, SPUs are established or incorporated by a Provincial or State Act, funded by the State Governments, and under their realm of control. However, given their phenomenal reach and hence their vital role in grooming talent across the country, their transformation is a collective national responsibility.

By 2035, the NEP 2020 target is to achieve a GER in higher education of 50 per cent. This implies doubling enrolment in our higher education institutions to nearly 9 crores over the next decade, with almost the same proportion of students continuing to study in SPUs. There are several outstanding SPUs, but the quality of higher education being imparted in many SPUs is hampered by a plethora of challenges. The primary one is the lack of high-quality physical and digital infrastructure. Limited funding negatively impacts the quality of research. Shortage of faculty adversely affects the pupil-teacher ratio. Above all, students' employability is a major concern.

Published research has also observed that increased devolution of funds to States under the 14th and 15th Finance Commission cycles has not led to a consequent increase in several State Governments' funding of social sectors, especially higher education. A fall in average growth rates in higher education expenditure in States during 2015-20 is evident, with median value coming down to 6.6 per cent compared to 10 per cent during 2005-10 and 2010-15. There are States with negative growth rates in spending on higher education.

While India's higher education sector has witnessed remarkable growth over the last seven decades, the pressing challenge now lies in ensuring high quality. NITI Aayog's recent report on 'Expanding Quality Higher Education through States and State Public Universities' focuses on this and attempts to bring higher education to the centre of India's development and policy discourse. An outcome of extensive consultations across 20 States and UTs and with over 50 SPUs, it makes nearly 80 policy recommendations across 12 sub-themes to address major systemic and institutional challenges. Many interventions around internationalisation, governance and financial autonomy are geared towards 'Leading' SPUs, those that feature in the top 50 SPUs in NIRF 2024 Rankings, given that they



are likely to possess in-house technical, managerial, and financial capacities to implement the suggested reforms. We provide a snapshot of policy recommendations and action pathways across four key themes.

The establishment of Research Hubs and Centres of Excellence in clusters of SPUs to leverage their core competencies and provide solutions to regional challenges can be a transformative step. Institutionalising holistic education including environment, human values and global citizenship education in the curricular and co-curricular domains of SPUs is a much-needed reform to create students with high levels of intelligence, and emotional and spiritual quotients. Handholding 'Leading' SPUs in each State to transition to MERUs (Multidisciplinary Education and Research Universities), creating career pathways in research, and encouraging student and faculty-led research commercialisation and start-ups can bring research centre stage in SPUs. 'Leading' SPUs can also promote internationalisation through long-term partnerships for joint research projects, and faculty and student exchange programmes.

State Higher Education Councils and State-level NITI Aayogs can play an important role in preparing State-level Higher Education Vision and Implementation Roadmaps for 2047 by identifying priority areas. At the institutional level, a shift towards a 'regulator-facilitator' model for SPUs and granting greater autonomy to 'Leading' SPUs in areas like governance, curriculum development, and faculty recruitment is crucial. This must be combined with capacity building of faculty and administrators to ensure that academic and research standards are upheld. Given the scale of students that need to be provided higher education over the next decade, an all-hands-on-deck strategy is essential to mobilise funding and financing from all quarters including Governments, industry, and civil society. 'Leading' SPUs must be empowered to devise

internal revenue generation strategies by expanding self-financed programmes in high-demand areas, establishing consultancy units, leveraging CSR funds, encouraging alumni and philanthropic contributions, and exploring innovative PPP models for infrastructure development and research. Enhancing autonomy to 'Leading' SPUs in financial decision-making including inflation-adjusted fee setting must be balanced with a robust system of merit-cum-means scholarships such that no deserving student is deprived of access to higher education.

Faculty must be encouraged to design and deliver industry-relevant courses to align with national needs. Promoting internships, apprenticeship-embedded degree programmes, and work-based learning opportunities is of equal importance to ensure employability. This requires strengthening collaborations with Sector Skill Councils, industry partners and trade associations to bridge the education-employability gap. It is equally essential that SPUs transition from a job-seeking to a job-creation mindset. Impetus must also be provided to physical education and wellness courses, language proficiency and lifelong learning programmes, to contribute to holistic and continuous student development. Many SPUs possess spare infrastructural facilities. In evening hours, these may be utilised to deliver short-term skilling programmes and generate additional revenues.

Given the prime importance of SPUs in India's higher education ecosystem, their transformation into becoming institutions of excellence providing high-quality education is a sine qua non for reinforcing our position as a global hub of knowledge and talent. Above all, this transformation of SPUs is vital for our endeavour to emerge as a Viksit Bharat by 2047.

(Dr VK Paul is Member, NITI Aayog; Dr Shashank Shah is Senior Specialist and Oshin Dharap is Consultant at NITI Aayog. Views expressed are personal)

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Mr Universe

Sandip K. Chakrabarti writes about the legendary Jayant Vishnu Narlikar

1938-2025



STEADY STATE: Narlikar (second from left) with his parents and younger brother

I first read about scientist Jayant Vishnu Narlikar in the Bengali magazine *Desh*. JVN had proposed the Steady State Theory, which states that the universe is supposed to remain the same in all directions for all time, even when it is expanding.

JVN was born on July 19, 1938, in Kolhapur, Maharashtra. His parents taught at Banaras Hindu University. After doing his bachelor's, Narlikar went to Cambridge University in the UK for higher studies and topped a tough mathematics course.

I was only 10 years old at the time I discovered JVN and his seminal work. Those days I was fascinated with extra-terrestrials. My favourite books in school were Santinay Chatterjee's *Are We Alone in the Universe?* and Swiss author Erich von Däniken's *Chariots of the Gods*. Then there was physicist George Gamow's *One, Two, Three... Infinity* and *The Black Cloud* by Fred Hoyle. All these books deal with the evolution of the Universe and the possible origin of life here and elsewhere.

Daniken had proposed that extraterrestrials or "ancient astronauts" visited Earth in the distant past and influenced human culture. He interpreted structures such as the Egyptian pyramids, the Stonehenge and the Moai of Easter Island as evidence of extraterrestrial influence.

Back to JVN. He also wrote science fiction. Some of the stories were quite prophetic. In a story called *Virus*, published in 2015, he envisioned a pandemic taking over the world. His 1986 book in Marathi, *Waman Purat Na Ala* (*The Return of Vaman*), tackled the ethical dilemmas of artificial intelligence.

In any case, back then, after reading JVN, I came to hero worship him. I was quite sure he would be awarded a Nobel Prize in physics some day.

At Cambridge, Narlikar teamed up with his PhD guide, the physicist Sir Fred Hoyle. Together, Narlikar and Hoyle laid the groundwork for a revolutionary theory that boldly proposed the continuous creation of new matter in an infinite universe. Their theory was based on what they called a quasi-steady state model.

Chandra Wickramasinghe, another student of Hoyle of Sri Lankan origin, was working on the possibility of life form entering Earth from outer space. Known as the Panspermia model, JVN joined this group much later.

Just when the Hoyle-Narlikar theory was becoming popular and congratulations and awards

were pouring in, Princeton physicists Arno Penzias and Robert Woodrow Wilson claimed that the universe came into existence in one single event about 14 billion years ago. And, that the universe was hot in the past. This was the new model of the universe, which Hoyle jokingly called the Big Bang model. If the universe was hot in the past, today we should see the relics of that hot radiation, he pointed out. Penzias and Wilson discovered that relic radiation and in 1978 bagged the Nobel — a nail in the coffin of the Steady State Theory.

For a while, when I was

still a student, I tried to reconcile the two contradictory models of the universe in my head.

It was JVN who introduced me to the universe in my childhood, but it was not until 1986, when I was a faculty at Caltech, that I contacted JVN for the first time. He was the head of the department of theoretical astrophysics at Mumbai's Tata Institute of Fundamental Research (TIFR) and I was exploring a position there.

JVN asked me to apply. The process took a while and in the meantime he quit TIFR for a new institute called Inter-University Cen-

tre for Astronomy and Astrophysics (IUCAA) in Pune. I eventually joined TIFR, but I shall always remember JVN's enthusiasm and his role in convincing me to return to India.

In the following years, we grew closer but never had the opportunity to collaborate on either of his favourite topics — Panspermia or Steady State Theory.

In 2020, my wife Sonali and I advanced our own theory about the beginning of life on Earth in the renowned *Astronomy & Astrophysics Journal*. We argued that DNA constituents and several amino acids can be generically produced during star formation anywhere in the universe. We suggested that whether ultimately life is created depends on the host planet's habitability. We did not follow either Daniken or JVN's model.

When American astrophysicist John Bahcall of Princeton University congratulated us for proposing the idea regarding DNA formation, JVN was upset! He wrote me a long email with a list of papers he wrote on Panspermia and asked me to cite them in our future publications.

In 2002, at S. Chandrase-

khar auditorium of IUCAA, there was a grand discussion on Vision 2020. It was A.P.J. Abdul Kalam's idea, the emphasis was on technology and innovation. The dais was full of Indian astronomers hailing from west and south India; JVN was also present.

Sitting in the audience that day, I expressed my doubt if IUCAA had indeed been successful in fulfilling its mandate to uplift astronomy and astrophysics studies in Indian universities. I suggested that every IUCAA PhD holder serve as a teacher for at least the first five years. The next day, JVN said to me, "I totally agree with you, but what can we do if universities do not create posts in astronomy and astrophysics?"

Over the years our communication with each other dwindled, but two years ago I got in touch with him to ask if he had any letters from Hoyle that I could display at the Indian Centre for Space Physics in Calcutta.

His reply was prompt, he asked me to come and see him in Pune.

When Sonali and I went to Pune, we found him in a very frail condition. He handed over many things, including many letters of reputed scientists sent to his father Vishnu Narlikar.

Little did I realise at the time that it was going to be the last time I would see them. That day, his beloved wife Mangala was pushing his wheelchair. She was herself suffering from cancer at the time. She passed away three months later.

In a scientific career, it is not always possible to write the most correct theory. Only a few, such as Einstein or Maxwell, S.N. Bose or M.N. Saha, wrote something which will last a very long time. Almost everyone else, including Newton, can dominate only for a period of time.

Personalities such as Fred Hoyle, Danis Sciama, George Gamow, John Wheeler, Arthur Eddington were brilliant but did not receive enough recognition. Those who put forward an alternative theory, or go against the tide, often contribute to the subject very significantly. I will put JVN in this category. His brilliant ideas and alternate views created new paradigms, which perhaps strengthened and established the opposite view more strongly.

That is also a great scientific contribution.

The writer is an astrophysicist and director of the Indian Centre for Space Physics in Calcutta

5/1/25

Analysing Internet access and digital skills in India

The first Comprehensive Annual Modular Survey shows that there is wider access to the Internet, but with significant variations across social groups

DATA POINT

Subhanil Chowdhury
Samiran Sengupta

One important target of the Sustainable Development Goals (SDGs) is to ensure inclusive and equitable quality education. Within this broad goal, there are two important targets pertaining to Internet and digital skills. Target 4.4.1 talks about the share of youth and adult population who have some Information and Communications Technology (ICT) skill. Target 4.4.2 pertains to a degree of proficiency in digital skills. Therefore, to attain the SDG4 target of education, providing ICT infrastructure and assessing digital skills is important.

The data to assess these skills were rather sparse until the National Sample Survey Office (NSSO) conducted the Comprehensive Annual Modular Survey (CAMS) between July 2022 and June 2023. This is arguably the first sample survey which asks a set of questions about people's access to, and use of, digital technology. The survey was conducted across India in 3.02 lakh households and with 12.99 lakh people.

At the all-India level, 76.3% of households have broadband Internet facilities. In rural areas, 71.2% of households have the facility, while in urban areas, 86.5% do. This data shows the deep penetration of the Internet in India. But there are variations across States, castes, gender, and class.

In some States, more than 90% of the households have a broadband connection. These include Delhi, Goa, Mizoram, Manipur, Sikkim, Haryana, and Himachal Pradesh. But in some other States, fewer than 70% have a broadband connection. These include West Bengal (69.3%), Andhra Pradesh (66.5%), Odisha (65.3%), and Arunachal Pradesh (60.2%).

There are also significant variations within caste groups on the is-

sue of broadband connectivity at home. In households in the general category, 84.1% have broadband connection, while the numbers for Other Backward Classes (OBCs), Scheduled Castes (SCs), and Scheduled Tribes (STs) are 77.5%, 69.1%, and 64.8% respectively. While it is significant that within all social groups, the majority of the households have broadband connectivity, OBC, SC, and ST communities are still significantly behind households in the general category in this aspect.

The most striking difference predictably exists in terms of income. Generally, the monthly per capita consumption expenditure (MPCCE) is used as a proxy for income, since income data at the household level is not available. From the unit-level data of CAMS, we have arranged the population from the bottom 10% to the top 10% in terms of MPCCE (Chart 1). While in the lowest decile class, 71.6% households don't have broadband connectivity, the number for the highest decile class is only 1.9%. However, even for those who belong to the second lowest decile class, the majority (56.2%) have broadband connection at home. In other words, while the poorest are still on the wrong side of the digital divide, broadband connectivity improves with every decile class. Economic status is a significant determinant of broadband connectivity. The government has said that provision of high-speed Internet is a fundamental utility akin to water or electricity (Digital India website). To facilitate coverage of the poorest sections of the society, the government can think of subsidising broadband connections so that there is universal coverage.

According to the CAMS report, 94.2% of rural households and 97.1% of urban households have mobile or telephone connections in their households. When we look at people aged 15 years and above, 92.4% in urban areas and 83.9% in rural areas can use mobile phones.

However, a deeper look at the data shows that the use of mobile phones is not as universal as the headline numbers suggest.

Table 2 shows the share of the population who use a mobile phone with an active SIM card exclusively, for making calls or accessing the Internet. The data shows that women and socially deprived sections are at a disadvantage. For example, within the general category, only 25.3% of women use mobile phones exclusively in rural areas, while the number for urban areas is 51.2%. For SCs, STs, and OBCs, the numbers are far below the general category for both men and women.

While there is a lot of discussion about 5G connectivity in India, data show that just more than half the population in rural areas uses 4G, while more than 70% in urban areas use the same. A significant share of the population (40.4%) still uses mobile technology which is more primitive than 4G. The share of people with 5G connectivity is negligible in the country.

To gauge digital skills, we focused on some basic tasks such as using the Internet, sending emails, copy-pasting from documents, using arithmetic operations in spreadsheets, and performing online banking transactions (Chart 3). Around 53.6% of the population (15 years and above) can use the Internet in rural areas and 74% in urban areas. The proportion who can send/receive emails is even lower (20% for rural, 40% for urban). Only around 40% of the rural population can perform the copy-paste function, while 60% of the urban population can. The share of people who can perform arithmetic operations in spreadsheets is extremely low. Only 37.8% of India's population aged 15 years and above can perform online banking transactions.

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Digital goals

The data for the charts were calculated by the authors based on unit level data of the Comprehensive Annual Modular Survey for 2022-2023



Chart 1: The chart shows the broadband connectivity of households according to the decile classes of Monthly Per Capita Expenditure (in %)

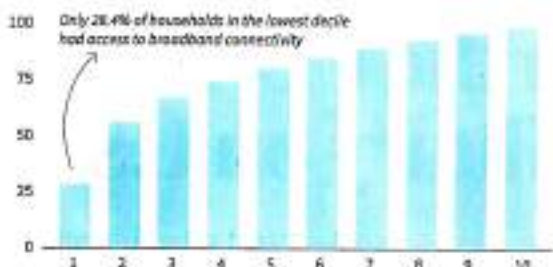
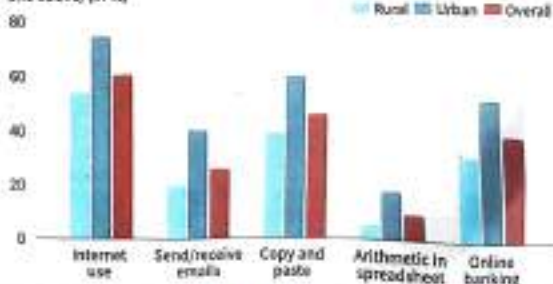


Table 2: Proportion of the population who use any mobile phone with an active SIM card exclusively for making calls or accessing the Internet

| Social group | Rural (%) | | Urban (%) | |
|--------------|-----------|--------|-----------|--------|
| | Male | Female | Male | Female |
| GEN | 45.8 | 25.3 | 69.9 | 51.2 |
| OBC | 41.1 | 20.6 | 63.3 | 41.9 |
| SC | 35.4 | 16.4 | 54.5 | 33.3 |
| ST | 35.6 | 15.5 | 61.3 | 43.9 |

Chart 3: Select digital skills of the rural and urban populations of India (15 years and above) (in %)



The city begins in the classroom

Green buildings are now part of the curricula, but dealing with heat and floods demands a paradigm shift that starts in the schools



KAUSHIK DAS GUPTA

THE FIRST HALF of 2025 has been a textbook case of the chaos wrought by climate change on weather systems. It has been another hot year, but the record-breaking temperatures have not been during the summer months. People in India experienced the hottest January since 1958. By February, not only was the cool weather in retreat, but the rising temperatures had also obscured spring in several parts of the country. It was the hottest that India has been in the second month of the year since 1900 — the national average temperature was 1.35 degrees above normal. The IMD issued its first heatwave alert for the summer as early as April. But May had none of the scorching temperatures usually associated with the month. Delhi, Mumbai and Bengaluru set rainfall-related records. Heat returned to north India in the first half of June. Showers have brought some relief to the people. Like parts of south India and Maharashtra, the region could experience an early rainy season if the IMD forecast holds true.

In recent years, another factor has made the hot weather more taxing for Indians. In several parts of the country, the summer months are becoming stressful not just because of the high temperature. The moisture in the air inhibits the body's ability to cool down through the natural mechanism of sweating. The strain is felt most acutely by outdoor workers such as construction hands, farmers, street vendors and food-delivery partners. A growing body of scholarship shows that their bodies are exposed to heat all day and do not get a chance to cool down even during the night. A 2022 World Bank study shows that more than 34 million jobs in India could be at risk by 2030 due to heat exposure.

The humidity is the result of multiple weather systems around the country, which in turn are fuelled by the general warming of the seas. If this wasn't enough, the atmospheric instability caused by moist winds from the Bay of Bengal has left its mark in several parts of the country. More than 150 people lost their lives due to lightning strikes in March and April — an over 180 per cent rise compared to last year. Bihar's disaster management authority records show that lightning strikes claimed more than 90 lives between April 9 and April 14. The state has always been a hotspot for lightning-related calamities. But these would typically happen in June-July.

Rain brings some relief but also leaves disruption in its wake. This year, the earliest onset of the monsoon over Mumbai coincided with the city breaking a 100-year-old record for rainfall in May. Large parts of India's financial capital, including

a newly built Metro station, went under water, reminding policymakers of the vulnerability of the country's economy to climate risks. The downpour exposed at least 50 new waterlogging sites in the city. In the past two weeks, several parts of Pune have been inundated. Bengaluru, too, has experienced disruptive floods, and parts of the Northeast have been badly hit by landslides.

The growing threat of climate stress calls for urgent mid- and long-term strategies — both structural and non-structural — to limit economic and social fallout. But first things first. Climate change and erratic weather are contributing factors. The underlying issues related to many of the problems faced by people underscore long-standing systemic gaps in planning, land use, and infrastructure management.

Experts have underlined that most Indian cities are about 2°C hotter than nearby rural areas. The concrete, asphalt and bricks used for urban infrastructure, roads, buildings and pavements soak up and retain heat. These materials are part of an engineering paradigm that relies on the use of strong materials to construct sturdy offices, houses and roads. The belief that they would withstand all kinds of weather hasn't been unfounded. But it's increasingly become evident that buildings are a source of extreme nighttime heat worldwide, including India.

Cities are both a product of people's aspirations and harbingers of their progress. It's natural that they will expand. However, urban expansion has become coterminous with real estate, and authorities have paid short shrift to the natural capacities of cities to deal with excess water. Whether in Bengaluru, Mumbai, Pune, or Delhi, urban development — planned and unplanned — has meant the loss of natural water sinks, exacerbating their vulnerability to climate risks.

It's now evident that most of India will live in cities in the coming years. Will these cities be heat resilient? How will they deal with short but intense bursts of rainfall? Climate science has helped us understand why we live in unpredictable times. The challenge now is to come to terms with the chaos.

Green buildings and climate-friendly planning are now part of the curricula in some of the top engineering and architecture institutes. That will not be enough. Climate-proofing cities requires a paradigm shift in Construction Science curricula across the country. Technology is, however, only part of the challenge. The weather vagaries pose broader questions to knowledge and pedagogical systems — they are as serious as the questions posed by AI and automation.

The environment has become mainstream to an extent. But all too often, in educational institutes, it's another box to be ticked. Ecology is yet to become a part of people's socialisation in most cities. Climate-proofing habitats and making people resilient to weather vagaries requires classrooms to engage with heat, rain, lightning, mountains, oceans, rivers, lakes, and drains as lived realities of communities — the beginning should be made in schools.

WHY OUR CHILDREN MUST ASK WHY

The perils of science without scientific temper

Ensuring the integrity of science education involves two non-negotiables – critical thinking and empirical inquiry

NAVNEET SHARMA AND
P M GURUBASAVARAJ

Scientific temper is essential for building an inquisitive, democratic, and progressive society. In India, despite significant developments in science and technology, the scientific mindset has not been able to enthuse our society successfully. This shortfall is a direct result of an education system that prioritises rote learning, relies on outdated teaching methods, and suffers from a lack of trained science teachers and effective communicators. Consequently, learners are seldom encouraged to ask questions or engage in meaningful knowledge construction. Scientific thinking, as Karl Popper rightly asserted, is rooted in doubt and challenges to established norms.

Science education in India is at a critical juncture. One of the most debated proposals from the National Education Policy (NEP) is the integration of Indian Knowledge Systems (IKS) into the curriculum. While this proposal is commendable – students must explore ancient India's significant contributions to science, medicine, and mathematics – the real challenge lies in how these systems are presented and who decides what qualifies as legitimate knowledge. We must approach this integration critically. The policy encourages the inclusion of IKS in curricula, which encompasses Ayurveda, Vedic mathematics, astronomy, linguistics, and even metaphysics, without differentiating between empirical, falsifiable knowledge, and faith-based cultural practices.

Middle school science education has a shaping influence on how students perceive the world. But today, it is at the intersection of politics, tradition, and pedagogy. Middle school marks the transition from intuitive learning to formal disciplines. This is where students need to be taught how to pose the question, "Is this true?" instead of "Does this affirm my belief?" It's also the time ideological distortion can do lasting cognitive damage – shaping worldviews based on nostalgia rather than evidence. If students are taught that mythology equals science, or that inquiry must defer to cultural pride, we risk creating generations of passive learners who merely accept everything without questioning.

The phrase "scientific method" is notably absent from the NEP 2020 document. While there is an emphasis

on "critical thinking" and "curiosity," no framework is provided to differentiate science from pseudoscience or logic from belief. In a country grappling with superstition, misinformation, and religious dogma, science education must equip students with the tools to question, test, and revise their understanding of the world – not merely celebrate cultural heritage. This omission is particularly disconcerting when combined with recent state-level changes to textbooks that have downplayed evolution, excluded Mughal history, and promoted unverifiable claims about ancient India's technological achievements.



Textbook sidebars such as "Did You Know?" often romanticise the past without offering critical analysis, referring to ancient innovations with little explanation of their scientific validity and inadvertently fostering respect over reasoning. The contributions of figures like Aryabhata in astronomy or Susruta in surgery can be inspirational, but they should be presented in a historical context with accuracy and scientific objectivity.

There is growing concern among scientists and educators that topics like evolution and human origins – traditional targets of ideological opposition – may be further marginalised under the NEP. Revisions to textbooks, presented as "curriculum rationalisation," have led to the removal of entire chapters on evolution and the periodic table from the Class 10 syllabus. The NEP's focus on "flexibility" and "local knowledge," may further dilute essential scientific content, especially when it conflicts with religious or political sensitivities.

To safeguard the integrity of science education, it is crucial to promote critical thinking and empirical inquiry – we must distinguish scientific knowledge from traditional beliefs. While IKS offer valuable cultural insights, they should be taught alongside modern scientific concepts, subject to empirical investigation, and eventually evaluated

using evidence-based reasoning.

More than mere text

From a very early age – preferably starting in Class 6 – students should be taught the fundamental principles of the scientific method, including hypothesis testing, observation, experimentation, and the essential principle of falsifiability. These skills are crucial for developing a scientific mindset. Another important area is transparency in the revision of educational materials. Changes to textbooks should be conducted through a public process, guided by scientists and educators, to ensure that content is not influenced by ideological biases. Teaching scientific topics such as evolution, climate change, and human physiology is essential. These subjects must be presented fully, without apology or dilution, so that students receive a comprehensive and accurate scientific education.

Additionally, we must introduce exercises that encourage students to critically compare modern scientific interpretations with traditional explanations. The juxtaposition should be conducted in a way that fosters curiosity and appreciation for alternative knowledge systems, rather than promoting blind acceptance. If implemented, these measures will not only enhance science education in India but also cultivate a generation skilled in critical thinking, enabling them to bridge gaps and thus contribute to a more intricate society.

Science texts are more than mere instructional materials; they are political documents that reflect what a country chooses to teach its children about knowledge, truth, and the importance of questioning. The NEP, despite its aspirational rhetoric, does not ground science in reason. Instead, it allows ideology to disguise itself as fact. Meanwhile, textbooks often prioritise cultural pride at the expense of critical insight. In an age of climate crises, pandemics, and technological revolutions, we cannot afford science education that caters to sentiment. We need classrooms that serve as laboratories of inquiry, not altars of nostalgia. The pressing question is not whether Indian science education is being politicised, but whether we will protect the integrity of science or allow it to become a casualty of cultural appeasement.

Children should learn not only scientific content but also the processes that generate that knowledge. Reforms in curriculum, pedagogy, and evaluation, combined with the infusion of scientific reasoning across disciplines, are essential for developing a society that consistently asks "why" and applies rationality to solve real-world problems.

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School spells hope for cancer patients

The Karnataka government's decision to establish a residential school for children suffering from cancer near the Kidwai Institute of Oncology in Bengaluru is a commendable step towards inclusive healthcare and education. With over 3,500 school-going cancer patients in the state, this proposed facility, aiming to enrol 1,500 children at a time, promises free accommodation, nutritious meals, specialised care, and uninterrupted schooling. This initiative, announced by School Education and Literacy Minister Madhu Bangarappa, ensures that young patients would not have to choose between health and their future. On the surface, the model offers several advantages. It supports holistic development of children with cancer by integrating structured education with continuous medical supervision. This synergy can significantly improve the quality of life for children battling cancer. The school's proximity to Kidwai Institute ensures immediate access to expert oncologists, reducing the logistical burden on families. In addition, living alongside peers facing similar challenges can cultivate a sense of emotional solidarity and mutual understanding, fostering a shared journey. For many, it will finally mean continuity in education, no longer disrupted by frequent hospital visits or prolonged absence from schools.

However, even well-intentioned proposals warrant scrutiny. One immediate concern is the risk of isolation. Confinement to a residential facility, while offering a secure environment, may inadvertently restrict interaction with peers outside the school, limiting social development. The emotional toll of separation from family, particularly for young children already grappling with the trauma of cancer treatment, can be profound. These students desperately need the emotional grounding and unconditional love that only parents and loved ones can provide. Another critical aspect is the quality of education; with government school SSLC results at a dismal 62%, setting up a residential facility is not enough. The children deserve and must receive competitive education. Running such a specialised institution must be justified by measurable outcomes both in health and academic performance. Such a facility needs substantial funding, and the government must ensure it is never starved for resources.

While the residential school is a step in the right direction, the government should look beyond this initiative and address the larger, systemic issue of over-centralisation of health services. The Kidwai Institute is already operating beyond its capacity—the government must establish regional centres across the state. This would not only help cancer patients but also allow children to stay close to their parents while receiving vital treatment, sparing families unnecessary hardship. By taking these comprehensive measures, the government can truly champion the cause of young cancer patients, paving the way for a brighter, healthier future.

The residential facility must also address the risk of children's isolation, ensure quality education

dufalk



J S RAJPUT

LANGUAGE OF INCLUSION

Children thrive in their mother tongue — but only if no one is left out

IT IS UNIVERSALLY acknowledged that young children learn best through their mother tongue. There can be no two opinions on the research findings cited in the NEP, 2020, which states that “children pick up languages extremely quickly between the ages of two and eight”, and promises that “all languages will be taught in an enjoyable and interactive style, with plenty of interactive conversation”. Given my long association with the education sector, I am, however, uncomfortable with some of the ideas being put forward.

The NEP lists “promoting multilingualism and the power of language in teaching and learning” as a fundamental principle. The CBSE is emphasising this in the schools affiliated with it. But why limit it to schools affiliated with one board? This may also be the right time to think of children whose mother tongue finds no place in schools, with no books or teachers. There are also children whose mother tongue has no script yet. One cannot ignore such realities or neglect the situation in a majority of government or municipal schools while advocating for multilingualism. Children studying there need to acquire linguistic skills. They are keen to learn multiple languages and certainly have the aptitude. But they need teachers — regular, properly trained ones — at the right teacher-student ratio, who understand their socio-cultural environment and

At times, our rhetoric becomes too grand and we end up ignoring core issues. Nearly 9 lakh regular teaching posts in government schools are vacant. This problem has persisted, with fluctuating numbers, for decades. What does ‘multilingualism’ mean for children studying in such under-resourced schools?

aren’t constantly anxious about whether they’ll be retained the next year.

If circulars alone had the power to change things, millions of children — mostly first-generation learners — would not have suffered humiliation, failure, and exclusion in the early years after Independence when they were brought to government schools by earnest teachers. The imposition of compulsory English learning, without aligning it to children’s spoken languages, contributed to higher dropout rates and poor performance. A transplanted education system — created by colonisers for a select few — was extended to achieve universal access, as envisioned in Article 45 of the Constitution, which directed the state to provide free and compulsory education to all children up to the age of 14. The system cracked under its own weight.

With the fading out of the earlier generation of Gandhian teachers and idealist politicians, we became unable even to recruit teachers on time. Today, for most Indians, the “power of language” is synonymous with learning English. Private, high-fee-charging schools are seen as the only hope of securing a “bright” future. Multilingualism will certainly help nurture talent and skills, but only in schools that have teachers who believe in lifelong learning and a management system that ensures the regular presence of trained

teachers with the necessary language skills.

At times, our rhetoric becomes too grand and we end up ignoring core issues. Nearly 9 lakh regular teaching posts in government schools are vacant. This problem has persisted, with fluctuating numbers, for decades. What does “multilingualism” mean for children studying in such under-resourced schools?

The late CJI Justice J S Verma, highlighted this in 2012. He unequivocally stated that over 10,000 BEd colleges were essentially selling degrees. So, what should our real priority be — promoting multilingualism or recruiting teachers who have earned their degrees? Or perhaps, just ensuring schools are functional?

In striving to match international benchmarks and meet the aspirations of a select group, let us not forget our constitutional obligation to provide equitable education to all. I must emphasise that instead of focusing disproportionately on a privileged section (like CBSE-affiliated schools), the more underserved should not be ignored. Let children learn in the language they are most comfortable with. Let them decide the rest as they grow. Unburden them — instead of overwhelming them with yet another circular.

The writer works in education, social cohesion and religious amity. He is presently an Atal fellow with PMML, New Delhi

A dearth of teachers and lack of clear approach have resulted in confusion and muddled execution of NEP's mandatory three-language policy

LIP SERVICE

Why States Struggle To Teach The Third Language

Texts Kirti Menon

In the corner of a school corridor in south Kolkata, a mother sits with her child quietly before a class without pay. Down the hallway, a part-time Hindi teacher, paid just Rs 5,000 a month, juggles private and student demand.

These are not isolated cases—they are scenes repeating across campuses of India, where the three-language formula of the National Education Policy (NEP) is a muddled mosaic of politics, policy and pedagogy.

The idea is simple on paper: every child in India should learn three languages—probably the mother tongue, Hindi or English, and one more Indian language. But in practice, the “third language” is often the orphaned child of the curriculum—cheerlessly underfunded, sporadically taught, rarely revised.

NEP recommended three languages to promote “multilingualism, national unity and cognitive development.” The policy says: “The three languages learned by children will be the choice of states, regions, and of the students themselves, so long as at least two of the three languages are native to India.”

In essence, the policy is designed to “balance local relevance with national cohesion and global readiness.” But many important Pragy Mukherjee says, “Not only does it not help, we don’t have teachers to teach it. They are already overwhelmed with understanding English texts. Language is not an immediate accomplishment. People learn languages if demanded by their environment. As social politicians are teaching their own sons and daughters.”

Bengal: Disinclination and Monorariums

In West Bengal, where the State Education Policy was introduced as a counterweight to the Centre’s NEP, the third language begins in Class 4—if schools can find someone to teach it. Hindi or Sanskrit is usually the choice for Classes 4 and 5, or in some cases Urdu, but few institutions at least full-time teachers for them. So principals approve.

“We employ a retired Sanskrit teacher on an honorary basis and a part-time Hindi teacher,” says Anil Sen Majumdar of Jodhpur Park Boys School in south Kolkata. However, the fee can be as little as Rs 5,000.

Keeping students engaged and motivating parents is equally a daunting task. Anjali Dutta, whose son is in Class 7 at a south Kolkata school, said, “Students are reluctant to study a third language, knowing it’s only for two years. Govt should ensure proper teaching and offer language options that could be useful later.”

Incoherently, Bengal is taught core subjects from Class 1. And while ASER (Annual Status of Education Reports) 2014 paints a picture of improvement in the state—71% of Class 8 students can read a Class 2-level text—parents are not entirely impressed with the standards.

Bihar: Ghost Classes, Silent Targues
In Bihar, the formula includes Hindi, English and Sanskrit or Urdu—but again, the approach smacks of lip service. “Some schools have students without teachers, others have teachers without students,” admits Meenu



Illustration: Lajay Das

Kumar, working president, State Primary Teachers’ Association. It’s not surprising, as sanctioned posts for language teachers has not kept pace with increasing students.

Retired Pusa University teacher and Sahitya Akademi Award winner Arun Kumar points out that students

have mostly opt for Sanskrit as third language besides Hindi and English. Even as there is a facility for Bengali teaching in some schools, there are very few teachers for the subject. “We don’t offer enough options. There is no imaginative engagement.”

Dore Marich, who is spoken in 180

languages, communitarian and has been included in the 8th Schedule of the Constitution, is not taught in schools as per Lingaraj Bhattacharya. But this was Marich’s popular language with a rich history but has not yet been made the medium of instruction even in the Biharihindi (Marich) belt of the state. “The education system hasn’t caught up with the linguistic richness of the state,” says Das. Yet, paradoxically, Bihar’s reading outcomes have improved 82.2% of Class 5 students can now read Class 2-level texts. Numbers rise, but the languages dwindle.

Uttar Pradesh: Two Languages, Too Many Barriers

Here, in the country’s most populous state, Urdu and Sanskrit are taught from classes 5 to 10 in private schools and is mandatory for classes 8 to 10 in govt and govt-aided senior colleges. In some govt schools can even choose to study Sanskrit till Class 12.

Students opt for Sanskrit are few and far between. Most tend to regard Sanskrit as merely a subject to clear in exams. Teachers, however, note that Urdu learning is more widespread because of its use in the literary world. “In our colleges, we have 15 Urdu teachers in a class of 40. They come from all universities,” says Shyam Shukla, an Urdu teacher in Lucknow. His class sometimes drifts into poetry and debates.

Reverent at teachers is fair, though. “We get many serious and committed teachers,” says Anil Agarwal of St Joseph Institute of Education, Lucknow. “But, for Sanskrit or Urdu, barely anyone applies.” According to educators and administrators in UP, the challenge is in recruiting teachers to teach Urdu and Sanskrit, as few opt for higher studies in these languages.

Agarwal says, continued professional development through workshops, conferences, and online courses will address the shortage. Mentorship programmes to connect experienced educators with newcomers and collaboration to gear better with academic standards in creating policies, he said, would create a conducive environment for teaching these languages.

Karnataka: Familiar Scripts, Fading Words

In Karnataka, the children speak Kannada, Marathi, Urdu—but not Hindi. “It breaks out of place,” says a senior teacher.

WHAT PARENTS WANT

Nearly half of 5,000 parents surveyed preferred mother tongue as the primary medium of instruction

59% of these surveyed supported combining regional languages with English

However, concerns persist regarding curriculum design, teacher training, and resource availability

teacher Shrihari Hegde. “They can’t argue it because they don’t know it.”

In Maharashtra, efforts to preserve Urdu and Marathi as third languages are an act of defiance, not policy. Urdu is offered in around 10 schools, but Marathi Academies, facing the salary bill, has no formal funding for it. Marathi’s journey is steeper still—just 100 in the schools now teach it, mostly in Dewanganji.

“People ask, why teach what they already speak?” says Jareshwar Shrivastava of the academy. But if the last speakers learn English, why not formalise our own?

Even students who love Urdu find no continuation in pre-university education, making the choice impractical. “We offer it out of love,” says Jyoti Shrivastava, Urdu teacher and drawing instructor, who worries what will happen after his retirement.

Maharashtra: Compounding The Confusion

Here, teaching the third language is not right from Class 1—at least in public schools. Teachers, however, are divided from the shock. “It was never in the original foundational education plan,” says Maheshwar Gargale, executive president of the State Board of Secondary Education. “Then suddenly we were told it must be taught—but with no extra teachers.”

In Maharashtra’s schools, English is a challenge in English-medium schools, it’s Marathi. A third language, usually Hindi, simply compounds the confusion. The state recently made Marathi compulsory across all schools till Class 10 Hindi, actually mandated till Class 12, was made optional after protests. ASER data shows that in 2014, 30.3% of rural students could read a Class 2 text—down from 28% in English medium. Proficiency remains low, just 12% of Class 3 students could read basic sentences in 2012. “Having depends on how many students opt for a language,” says Datta Khair, a headmaster, assistant principal. “We listen to teachers.”

The Language We Lose

For a country that prides itself on linguistic diversity, not choosing either the opposite. Third languages are a constitutional promise, a perennial pitfall—but, increasingly an administrative burden, experts say. Prof. Mani Mahesh of Lucknow University offers a hopeful note. “Multiple languages don’t just have neural pathways. They connect us to each other. To learn a third language is to increase cultural understanding between our people, expose our children to the traditions of neighbouring states and their people, and encourage a whole new generation to begin to breathe two and sometimes three.”

But, for that to happen, it must first be taught with purpose—not as a policy checkbox. Not as a burden because it’s a language and the world.

With inputs from Prakashini Bhatnagar, B K Mishra, Mohini Dey, Anurag Kumar, Ananya, Sanyal and Ashwini Choudhary

“Not only does it (the 3-language policy) not help, we don’t have teachers to teach it. They are already overburdened with understanding English texts... As usual politicians are loading their issues onto children



—POOJA MISHRA, LINGUIST



The real challenge for foreign campuses

There has been much debate in India about attracting foreign university branch campuses since the University Grants Commission (UGC) established regulations in 2023. A few have set up shop: two Australian universities – Deakin University and the University of Wollongong – in Gujarat's GIFT City, and the U.K.'s University of Southampton in Gurugram, near Delhi.

The momentum has continued to grow in recent months. Last week, Letters of Intent were issued to five foreign institutions – the University of York, the University of Aberdeen, University of Western Australia, Illinois Institute of Technology, and Italy's Istituto Europeo di Design (IED) – to establish campuses in Mumbai.

However, early indicators suggest that Deakin and Wollongong, which began classes last year, and the University of Southampton, which is going to welcome its first batch of students, may be moving too quickly. Admissions were announced often before essential details, such as information about the faculty and other key elements, were made publicly available. While this rapid pace may signal strong intent and enthusiasm, it also raises many concerns.

Challenges to the branch idea

Globally, transnational education is navigating an increasingly uncertain landscape. This may be one of the most difficult global environments for universities to establish branches. The country with the largest number of overseas university branches globally, the U.S., is in complete disarray due to attacks on higher education from the Donald Trump administration. The last thing on the minds of most American university leaders is foreign initiatives. Therefore, the Illinois Institute of Technology's decision to establish a campus in India should be seen as an exception.



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A major issue for foreign university branch campuses is navigating India's highly competitive higher education landscape

Even institutions willing to enter the Indian market will have to overcome numerous domestic challenges. A major issue is navigating India's highly competitive higher education landscape.

Most of the institutions seeking to enter the Indian market are not top-tier schools in their own countries. In India, they risk being seen as just one among several "elite" options available to students. These branch campuses follow a market-driven model, offering programmes in high-demand fields such as business, computer science, and data analytics. While this approach may be financially strategic, the narrow academic focus risks making them indistinguishable from India's better-performing private colleges and universities.

Therefore, the real challenge is to establish a clear academic identity. Without this, they risk being perceived as little more than diploma mills, ultimately undermining the reputation of the very universities they represent. It is also relevant that most of the branches already established or planning to be established are not comprehensive universities with diverse offerings and research focus, but rather are small specialised schools.

India already boasts renowned public institutions such as the Indian Institutes of Technology (IITs) and Indian Institutes of Management (IIMs), which are actively expanding their global engagement and research capabilities. Furthermore, a growing number of elite and semi-elite private universities in India now offer joint and double-degree programmes in collaboration with foreign institutions. In this dynamic environment, foreign branch campuses cannot rely solely on the strength of their brand.

A concerning trend among some international branch campuses already established in India is their disproportionate

reliance on marketing strategies, often at the expense of academic investment. While marketing has its place, it cannot substitute for substance. Students and parents are increasingly discerning. They examine publicly available information on faculty credentials, curriculum design, industry relevance, and student support systems. Flashy campaigns without academic depth or meaningful student engagement will not build lasting trust.

Another key problem lies in students' perception and the reality of campus life. Early observations suggest that most of these branch campuses operate out of vertical buildings, often renting space. If foreign universities wish to be perceived as full-fledged institutions, they must invest in essential "soft" infrastructure as well.

Need for local relevance

From the Indian perspective, selecting the right partner is important. Universities from the Global North are typically interested in branch campuses for several reasons. Host countries or institutions may offer major incentives in terms of facilities or funds. In many cases, the primary motivation is to earn money, as illustrated by several branches in Dubai. Some wish to establish a presence in a country to recruit students to the home campus. Without major incentives, top global universities will seldom be attracted. India will need to carefully evaluate whether a particular branch proposal is suitable for local needs, and, whether it is from a foreign institution that is attractive.

The establishment of foreign university branch campuses in India marks a significant milestone in the higher education landscape. However, if these ventures are rushed or poorly managed, they risk becoming cautionary tales – short-lived initiatives that erode trust, dilute brand value, and stall the broader momentum toward meaningful internationalisation.

LEFT OUT

All over the world, there are more than 272 million children out of school. This alarming finding was presented by UNESCO's *Global Education Monitoring Report* of 2025, showing 21 million more than the last estimate. Of primary school-age children, 11% are out of school, 15% of the lower secondary age group, and 31% of the upper secondary group. This suggests that older children, probably in developing countries, tend to leave school early either to work, or simply drop out because of disinterest. This is a huge problem in India where the Lok Sabha was informed by the government that 1.17 million children are out of school. India's target according to the National Education Policy is 100% enrolment by 2030. According to the report, fresh enrolment and attendance data account for 38% of the increase in out-of-school children. Girls in Afghanistan, for example, cannot go to high school. Recent United Nations population estimates are also responsible for 62% of the increase.

The *GEMR*, however, uses different methods for its model. If the data are administrative, there is no updated account of enrolment and attendance; the increase in population is considered out of school. If the basis is a survey, then the data are more accurate because countries have their enrolment and attendance for each year. The team imputes values for the years when no data are available. So they may not always be the same as the countries' out-of-school figures. The model also depended on the census because the increase in population is a modifying factor in the final estimate. The report, however, assumes that school-age populations are stable and does not take account of crises and conflicts. These affect attendance and enrolment. Many children did not go back to school in India after Covid. Some had fallen behind, not being able to access lessons digitally; some went to work to help their families which had lost their livelihood; some were left without parents or at least the earner of their household. Conflict may not only reduce attendance, children may leave school by migration to safe zones. But it also makes data collection difficult. But even if the figures in the report are not fully accurate, the picture it gives is of an enormous number of children who would find it difficult to cope in a literate and high-tech age.

22/19/10

A RETHINK ON INDIA'S STEM REVOLUTION CATALYSTS AND CONTRADICTIONS: AI, EQUITY AND FUTURE OF STEM IN INDIA

OPINION

PROF. RAGHAVENDRA P. TIWARI



India's developmental ambitions, epitomised by the vision of developed nation, are inextricably linked to the effective integration of Science, Technology, Engineering, and Mathematics (STEM) education with frontier technologies such as Artificial Intelligence (AI). While India boasts one of the world's largest pools of STEM graduates and a demographic dividend skewed towards youth, these advantages risk remaining notional unless underpinned by sustained investments in quality, contextual relevance, and ethical governance of AI-driven pedagogy. The critical issue, therefore, is not simply the adoption of AI in education, but rather how inclusively, equitably, and ethically AI is being embedded within India's heterogeneous educational landscape.

Despite a proliferation of policy pronouncements and pilot initiatives, the mainstreaming of AI in STEM education is beset by persistent disparities. Digital access remains uneven, with infrastructure deficit particularly acute in rural and marginal geographies. Faculty preparedness and

pedagogical innovation lag technological advancements, raising concerns about the capacity of mentors to meaningfully integrate AI tools into classroom environment. Moreover, curriculum reform has often been incremental and fragmented, failing to keep pace with the rapidly evolving demands of the knowledge economy. These structural impediments threaten to reproduce, rather than redress, existing inequities—risking a scenario in which AI-enabled learning becomes prerogative of the privileged.

A critical assessment of India's AI-STEM interface must therefore move beyond celebratory narratives of technological leapfrogging to engage with the deeper structural and normative conditions shaping this transition. Policy frameworks must foreground issues of access, affordability, and cultural relevance, ensuring that AI integration does not exacerbate social and educational divides. Pedagogical interventions should be rooted in evidence-based practices, prioritising critical thinking, creativity, and ethical reasoning over rote automation. Furthermore, infrastructural investments must be accompanied by robust capacity-building for educators and sustained engagement with local contexts.

SOCIO-CULTURAL DIVERSITY, DIGITAL DIVIDES, AND ETHICAL GAPS

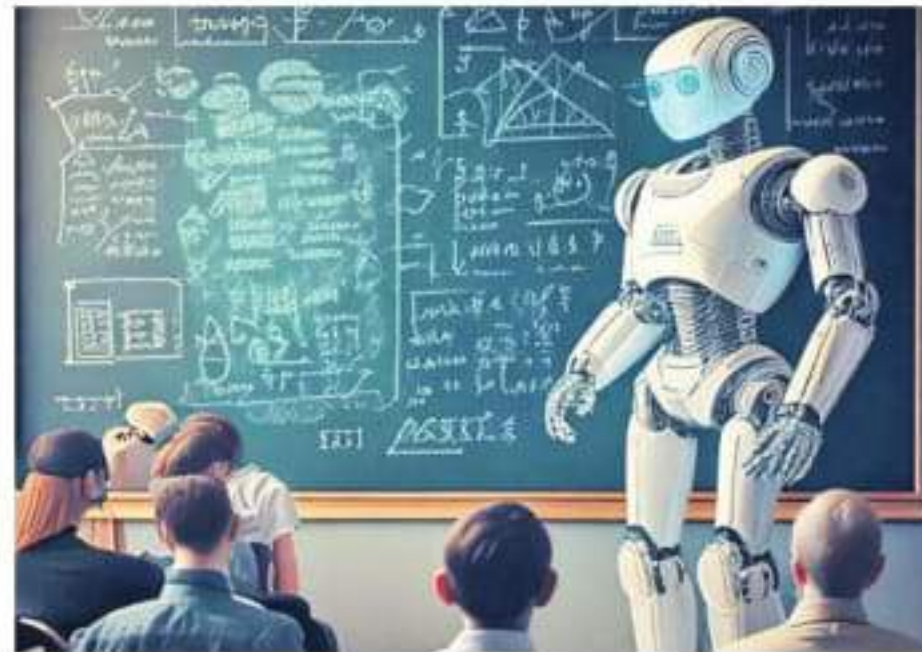
While AI offers the promise

of personalized and inclusive learning, most existing systems are not adequately equipped to address India's linguistic plurality, regional variations, and diverse pedagogical traditions. As a result, there is a real danger that AI-enabled education will deliver a homogenized experience, overlooking the lived realities and cultural contexts of students from different backgrounds. Efforts to develop vernacular and context-sensitive AI tools remain limited and are often concentrated in urban or elite spaces, leaving rural and marginalized communities underserved.

Current policy initiatives, including those outlined in the National Education Policy (NEP) 2020, formally recognize the need for ethical AI deployment and bridging digital divides. However, the translation of these commitments into practice remains inconsistent. Digital infrastructure is still uneven, with many government and rural schools lacking basic connectivity and devices. Teacher training on AI integration is also inadequate, further deepening the digital divide. Thus operationalizing this across a vast and diverse education system is a significant challenge. Consequently, the benefits of AI-driven education are at risk of accruing primarily to already advantaged groups, exacerbating rather than alleviating existing inequities.

DEMOGRAPHIC DIVIDEND DILEMMA: QUALITY VS. SPEED IN STEM EDUCATION

The prioritization of technological acceleration in STEM education, without a commensurate focus on quality and contextual relevance, poses significant risks. Over-reliance on AI may side-line the irreplaceable human elements of education—such as empathy,



mentorship, and cultural connect—essentials for holistic learning. AI, no matter how advanced, cannot fully replicate the nuanced understanding and adaptability that skilled mentors bring to India's diverse classrooms. If technological solutions are prioritized without parallel investments in pedagogy, curriculum reform, and teacher empowerment, superficial modernization will fail to foster genuine engagement, creativity, and critical thinking among students.

India's emphasis on its demographic dividend does not, by itself, guarantee inclusive or equitable AI-enabled learning. This advantage may be realized through targeted measures to address infrastructural gaps, faculty readiness, and socio-cultural barriers. Policy frameworks must move beyond demographic optimism and technological determinism to ensure that AI integration is grounded in equity, access, and cultural relevance. This requires sustained investment in digital infrastructure, robust teacher training, and the development of AI tools that are linguistically and culturally adaptive. Without such recalibration, the promise of

AI in STEM education may deepen rather than bridge educational divides, and the demographic dividend may remain unfulfilled.

AI AND THE TRANSFORMATION OF STEM LEARNING

The integration of AI into the educational landscape has generated considerable debate regarding its potential to enhance the understanding of STEM subjects. AI's promise lies in its ability to personalise learning adapt to individual student needs, and provide real-time feedback, thereby potentially transforming the rigid, one-size-fits-all model that has long plagued STEM education. Adaptive learning platforms powered by AI can diagnose students' strengths and weaknesses, offering tailored contents and upscaling that may help bridge learning gaps. Furthermore, AI-enabled simulations and virtual laboratories can democratise access to experiential learning, which is often constrained by inadequate infrastructure. These technological interventions could foster deeper conceptual understanding and encourage critical thinking, moving STEM education beyond

rote memorisation.

The current status of STEM education in India, however, is marked by both progress and persistent challenges. The NEP 2020 has provided a much-needed impetus to STEM education, emphasising experiential learning and integration of technology from the early years of schooling. India has one of the largest cohorts of STEM graduates but this quantitative expansion need to be translated into quality. Apart from digital divide, gender disparities are also pronounced, with women constituting only a modest proportion of STEM cohort and an even smaller share of the STEM workforce. Moreover, the curriculum often remains disconnected from real-world applications and rapidly evolving industry needs, leading to a mismatch between educational outcomes and workplace requirements.

LEARNING BEYOND BOUNDARIES: AI AS A CATALYST FOR FUTURE THINKERS

Although AI-enabled platforms have the potential to transform classrooms into centres of inquiry and innovation, prevailing disparities

hinder their effective utilization. To address these challenges, policymakers must move beyond pilot projects and adopt a systemic approach: first, by mandating AI literacy and ethics across all levels of the school curriculum, as outlined in the National Education Policy (NEP) 2020, and ensuring that AI is not merely an add-on but a core component of digital and scientific learning. Second, targeted public investment is essential for bridging the digital divide through mobile AI labs, offline content delivery, and partnerships with industry and NGOs. Third, a national AI teacher training policy should be established, making AI training compulsory in B.Ed. programs and annual upskilling with resources tailored for low-connectivity environments.

FOSTERING CRITICAL AND ENTREPRENEURIAL CAPACITIES: REGULATORY AND ETHICAL IMPERATIVES

Policy must also address the regulatory and ethical dimensions of AI in education. The rapid deployment of AI tools raises urgent concerns about data privacy, algorithmic bias, and academic integrity. The forthcoming Digital India Act and the establishment of an AI Centre of Excellence in Education are steps in the right direction, but must be accompanied by enforceable standards for transparency, regular audits, and clear protocols for data protection and learner welfare. Collaboration between government, academia, and industry is vital to develop context-sensitive AI applications that reflect India's linguistic and cultural diversity, while ongoing research should help evolve adaptive curricula and assessment systems. Ultimately, AI's promise as a catalyst for

critical thinking and entrepreneurial skills will only be realized if its integration is governed by strong compliance frameworks, sustained funding, and a commitment to inclusive, contextually relevant educational reform.

Conclusion: Towards Inclusive and Contextual AI in STEM Education

The transformative promise of AI in Indian STEM education will not be realized through technological determinism alone, but through a deliberate, inclusive, and ethically anchored strategy. India's journey toward developed nation hinges on moving beyond pilot projects and fragmented reforms to address foundational questions of equity, quality, and governance. Policymakers must prioritize sustained investment in digital infrastructure to bridge regional and socio-economic divides, for making AI-driven learning accessible to all. Mandating AI literacy and ethics across curricula, and embedding teacher training are essential for meaningful classroom integration. Regulatory frameworks, such as the Digital India Act, must be urgently strengthened to safeguard data privacy, ensure algorithmic fairness, and promote transparency. Collaboration with teachers, researchers, and industry is vital for developing context-sensitive, multilingual AI tools and adaptive curricula. Targeted interventions to promote diversity and inclusion—especially for girls and disadvantaged group—will be the key. Only through such comprehensive, equity-driven reforms, AI can become a genuine catalyst for innovation, social mobility, and a future-ready STEM education system in India.

Views are personal.

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Drunk drivers: Schools must step up

It is shocking that 58 school vehicle drivers in Bengaluru were caught driving under the influence of alcohol, once again exposing the systemic negligence that plagues the school transport system. The licences of these drivers who were found to have consumed alcohol much above permissible limits during an early-morning crack-down have been sent to the RTO for suspension. This is not merely a case of drunken driving – it is a direct assault on the safety of children. The fact that drivers entrusted with the care of children reported to duty intoxicated is a betrayal of the highest order. What is even more troubling is that such checks are difficult to conduct during peak hours due to manpower shortages and the morning traffic congestion. The dangers posed by a drunk driver extend far beyond the risk of accidents, as they may exhibit unpredictable and inappropriate conduct raising concerns of misbehaviour or aggression towards children.

Therefore, the burden of accountability cannot rest on the police alone; transport contractors and school managements should also be held responsible. If a bus driver is found under the influence of alcohol, the contract should be terminated and legal proceedings initiated. Schools must be made answerable too because they are the ones who appoint these contractors and are responsible for the well-being of the children under their supervision. Schools are the primary custodians of children during school hours and transport – their duty extends beyond academics to ensuring the physical and psychological safety of every child. Parents too need to introspect. Often, they entrust their children to overcrowded vans and auto-rickshaws without verifying the credentials or fitness of the driver. When a tragedy occurs, the outrage is always directed towards the authorities – but why wait for a tragedy? It is high time parents demanded accountability from the school managements.

The image of an inebriated driver behind the wheel of a school bus is alarming. The Karnataka State Commission for Protection of Child Rights should view this issue with utmost seriousness, as it directly impinges on the fundamental right of children to safety and protection. A robust Standard Operating Procedure (SOP) should be put in place, requiring breath analyser tests for all drivers before they begin their duty each morning. As the Joint Commissioner of Police (Traffic) pointed out, the authorities are now contemplating invoking provisions of the Juvenile Justice Act, 2015, against the offending drivers. This is not just appropriate – it is necessary. Ultimately, safeguarding children is a collective responsibility: stricter enforcement, greater accountability from school managements, and heightened vigilance from parents.

The risks are alarming; as custodians of the children, schools should be held accountable

20/6/25

Teachers that Tripura chose to forget

VARUN SUCHDAY

In the silent corners of South Tripura, the jungle overlooks the homes of erstwhile teachers. It's a scene common across Tripura: 10,323 teachers were dismissed by the state government 10 years ago.

Tanmay Nath and others filed a case in 2014 against the wrongful recruitment of 462 government teachers by the then-state government of The Left Front. The state government had recruited 10,323 teachers, including 1,100 postgraduate, 4,617 graduate, and 4,606 undergraduate teachers. The Tripura High Court ruled in favour of Tanmay Nath and others, stating that the state government's 2003 Employment Policy was "bad in law".

Para-127 of the High Court verdict clearly stated that the order of the division bench applies only to teachers mentioned in the case by Tanmay Nath and others. The state government, however, terminated the entire cohort of 10,323 government teachers. Even today, a majority of these teachers are unemployed.

Pradeep Reang is one of them. When I met him in Reang Para, a village on the edge of the forest, he greeted me with a quiet smile and a tattered plastic chair outside his mud house.

"I wasn't even named in the case," he told me. "We [teachers] filed RTIs. The response confirmed it. Still, we were all terminated."

Their appeals to different courts failed. Their protests, including a large gathering in Agartala in 2021, were met with water cannons and tear gas.

"When our petitions were dismissed, we turned to whatever work we could find," said Pradeep. "I started farming and rubber tapping. Some teachers drove rickshaws, sold vegetables, or turned to odd jobs... 180 [160] teachers died, while some committed suicide due to economic hardships. Teaching is a well-respected profession. We lost respect and income overnight."

Private schools are reluctant to hire them due to probable legal implications. "We have been stigmatised. People don't know who the 400 [462] teachers mentioned in the case are, so they are sceptical. Private schools don't want to get involved. All doors are shut!"

shared Pradeep.

The government's response since has been, at best, evasive. In 2018, the new BJP-led state government offered a one-time extension to teachers, which expired in March 2020. On March 31, 2020, one week into the first coronavirus lockdown, 8,882 teachers were again unemployed.

I headed to another village in South Tripura to meet three terminated teachers to gain more clarity. I met Bijoy, Samyukta, and Subhash (names changed to protect their identities).

"We were proud to serve," Samyukta told me. "It was a dignified job. The verdict ruined our lives. We were young and in our prime 10 years ago. We could've achieved a lot in life."

Recent developments make their story even more painful. In April 2025, the Tripura government acknowledged the teacher shortage and the need to find "the best teachers" from outside the state to improve education quality. The terminated teachers, still living and searching for employment in Tripura, weren't even mentioned by the state government.

While the state government's decision to address the shortfall is a step in the right direction, what about the well-trained and experienced former teachers still searching for employment and answers? Might the state government consider listening to their concerns and addressing them? The 2014 High Court verdict clearly stated that the state government must run a fresh recruitment drive and complete it before 31 December 2014. The state government did not. The Supreme Court Bench upheld the High Court's verdict in 2017 but asked the state government to complete a fresh recruitment drive by 31 March 2020. Once again, the government failed to do so.

Those once entrusted with shaping Tripura's future generations are now nowhere in the conversation. They have been quietly erased, not just from their jobs, but from the state's conscience, too. Ten years is a long time to wait for justice. Can the state government secure the state's future by acknowledging and addressing its past oversight? Can it find a solution closer to home instead of searching elsewhere?

(The author is an independent researcher and writer)

20/20/9

NO STOPPING HER

Class XII board exam data from 2024 show science is no longer a boys' club. Challenge now is to keep up the momentum

DATA ON 2024 Class XII board exams, released by the Ministry of Education, tell a story of quiet persistence: For the first time in a decade, more girls — 28.14 lakh — cleared the board exams in the science stream than in humanities — 27.24 lakh. These figures mark a powerful shift in academic and social dynamics. As an analysis of numbers from 25 school boards between 2010 and 2023 by this newspaper in September 2024 showed, only 38.2 per cent of students clearing science in 2010 were girls. By 2023, that number had climbed to 45.5 per cent, setting the stage for the 2024 breakthrough. The reversal of the longstanding gender tilt toward humanities is an affirmation that science — once seen as a male preserve — is being actively pursued by female students across the country. In a country aspiring to be a global leader in the knowledge economy, this is welcome news: Drawing on the scientific potential of half its population is not just desirable, it is essential.

State-level results underscore the national picture. In Tamil Nadu, girls achieved a formidable 96.35 per cent science pass rate in 2024; in Jharkhand, Bihar and Odisha, girls outperformed boys. This reshaping of ambition and possibility has been facilitated by growing parental encouragement and good-faith policy interventions such as the Vigyan Jyoti scholarship schemes for girls from disadvantaged backgrounds, and the CBSE's Udaan initiative, which helps underprivileged girls prepare for engineering and medical entrance exams through mentoring and financial aid. What happens when more girls enter higher education in STEM? According to the All India Survey on Higher Education 2021-22, women now make up 52.1 per cent of all students in science disciplines across undergraduate, postgraduate, MPhil, and PhD levels. At the undergraduate level, they constitute a little over 51 per cent of the total enrolment. In medicine, women are at par with men; in engineering and technology — fields where they have traditionally been a sliver — their representation has risen considerably. These numbers point to a future workforce that is likely to be more diverse, representative, and arguably, more innovative.

The promise of these numbers, however, will continue to come up against the shadow of unequal realities unless it is met with deeper investment in infrastructure, mentorship networks, employment opportunities and safe spaces to learn and to linger in. Girls from rural areas and low-income households still face immense barriers that cap their ambitions: Lack of resources; unavailability of laboratories and equipment; a private study space, or simply, the right to stay in school. If this moment is to make room for long-term change, it must ensure that STEM dreams that have got off the block are not stalled midway. *setoo*



A new framework proposes India's civilisational resurgence through culturally rooted governance and ethics



A CIVILISATIONAL PARADIGM

BY SACHIDA NAND JHA

In a world increasingly defined by materialism, cultural dislocation, and fractured identities, *The Hindu Manifesto*, authored by Swami Vignaneswaran, seeks to offer a distinct roadmap for India's resurgence as a civilisational state in the twenty-first century. Far from being a conventional political document, *The Manifesto* articulates a culturally rooted framework for national resurgence, advocating for a model of governance, economy, education, and social ethics anchored in Hindu Dharma.

Drawing from primary sources including the Vedas, the Ramayana, the Mahabharata, the Arthashastra, and Shukraniti, it articulates an indigenous theory of state and society, aimed at enabling a holistic national reawakening. *The Manifesto's* eight foundational 'Sutras' serve as a blueprint for national regeneration, connecting ancient Hindu principles with contemporary imperatives of governance, gender justice, education, ecology and global engagement.

Perhaps the most compelling feature of *The book* is its critique of both capitalist and socialist economic paradigms, since the first 'Sutra' posits that economic empowerment is foundational to Dharma. Quoting Chanakya's maxim 'Dharmaya Meulam Arthah', *The Manifesto* advocates a dharmic way for wealth creation through entrepreneurship, indigenous trade systems, and decentralised economic models. Economic empowerment is emphasised not as a utilitarian pursuit, but as a moral imperative to support societal welfare and as a key instrument of national rejuvenation. The second 'Sutra'

dealing as it does with security, is seen as a holistic concept—extending beyond defence and external threats to include cultural, informational and demographic integrity. It calls for the modernisation of the armed forces, the strengthening of strategic infrastructure and the development of a foreign policy rooted in civilisational assertion and cultural confidence rather than ideological dependency.

Educational reform is central to the manifesto's vision as it appears in the third 'Sutra'. It rightly argues that the current system is still largely colonial in structure and content, fostering cultural inferiority and historical ignorance.

And it proposes an integration of Indian epistemology and indigenous knowledge systems into mainstream curricula. The goal is to decolonise the Indian mind and foster a new generation that is both intellectually independent, morally grounded, and culturally rooted. The fourth 'Sutra' invokes the idea of responsible democracy, emphasising governance rooted in Dharma. Democracy, in this framework, must transcend electoral mechanics and promote ethical leadership, decentralisation, and public accountability.

It emphasises the moral obligation of both elected representatives and the electorate to uphold national interests over narrow sectarianism and short-term populism. In the fifth 'Sutra', the manifesto draws attention to the Hindu idea of womenhood ('Yatra naryastu pujanya mananto tatra Devatah'). It demands not only gender equality but also societal respect and structural reforms to eliminate violence and discrimination against women, thus restoring their rightful agency in all spheres since the manifesto affirms that

THE MANIFESTO THUS ENCOURAGES GLOBAL HINDUS TO FORM THINK TANKS, MEDIA PLATFORMS AND POLICY GROUPS THAT REPRESENT THEIR INTERESTS WITH DIGNITY AND CLARITY. THIS TRANSNATIONAL STRATEGY IS NOT AIMED AT POLITICAL DOMINANCE BUT AT SECURING A SPACE FOR DHARMIC VALUES IN GLOBAL DISCOURSE. IT PROMOTES ECONOMIC, CULTURAL AND ADVOCACY EFFORTS TO ELEVATE BHARAT'S GLOBAL NARRATIVES

gender justice is integral to civilisational progress. Addressing one of the most sensitive and often misunderstood aspects of Hindu society, the manifesto in the sixth 'Sutra' calls for Sarvaṅgik Samasta-social cohesion beyond caste and sectarian divisions. The text advocates for the abolition of caste-based discrimination, emphasising shared rituals, sacred spaces, and narratives to foster unity. The Hindu tradition's reverence for nature forms the basis of the seventh 'Sutra'. Environmental protection is not a policy option but a Dharmic obligation. The manifesto calls for sustainable development, organic agriculture, water conservation, and ecological education, all anchored in the Vedic concept of living in harmony with Prakriti (nature).

Citing texts like the Rig Veda and Bhagavad Gita, trees, rivers, hills, mountains, animals, all are seen as manifestations of the divine. It also critiques the exploitative nature of industrial modernity and proposes an eco-conscious lifestyle aligned with traditional reverence for the Environment. Probably the most emotionally charged 'Sutra' is that of

respect for the land-patriotism as a sacred duty. For Hindus, the land of Bharat is not just geography; it is Bharat Mata, the Mother, the living embodiment of culture and sacrifice. The final Sutra, therefore, emphasises the urgent need for cultural decolonisation. From restoring temples and reviving classical arts to preserving traditional festivals and promoting indigenous sciences and languages, it seeks to re-anchor Indian national identity in its civilisational legacy. This cultural continuity, it argues, is essential not just for identity but for national resilience and global relevance.

Theoretical Foundations:

Released in April 2023 at Prime Minister's Museum, in New Delhi by RSS Chief Mohan Bhagwat, *The Hindu Manifesto* is theoretically anchored in Integral Humanism (Ekatra Manav Dandhan), a concept developed by Pandit Deendayal Upadhyaya. This ideology harmonises the material and the spiritual, the individual and the collective. It rejects both Western liberal individualism and socialist statism, proposing instead a model where human beings are treated as integrated wholes, Shari (body), Manas (mind), Buddhi (intellect), and Atma (soul). According to this frame-

work, the purpose of the state is not merely economic management but moral cultivation. Development must therefore be aligned with the spiritual goals of society. One of the distinctive contributions of the manifesto is its emphasis on global Hindu unity. The Hindu diaspora, comprising millions across continents, is seen as a strategic asset. Swami Vignaneswaran envisions a networked global Hindu presence enabling Hindus around the world to unite as a cultural and spiritual force. This includes active political participation, economic collaboration, and cultural diplomacy. While the Manifesto draws upon ancient Indian principles, it also engages with modern political concerns. Unlike liberal democracies that emphasise individual rights or socialist states that prioritise equality through state control, the Hindu Manifesto envisions a civilisation-state, one where the purpose of governance is to preserve and promote a way of life rooted in Dharma. *Hindu Manifesto* is thus a bold and timely attempt to reframe Indian national discourse in civilisational terms. It articulates a model of development where economy, education, governance, and ecology are all aligned with the deeper moral-spiritual framework of Dharma. At a time when the world grapples with ecological crises, ethical voids, and identity fragmentation, Bharat's Dharmic wisdom, as articulated in this manifesto, offers a potential alternative.

—The author is a Assistant Professor in Rajkumar College University of Delhi, New an Patronal

HINDU MANIFESTO



SWAMI VIGNANESWARAN

ABOUT THE BOOK:

Book: *The Hindu Manifesto*
Author: Swami Vignaneswaran
Publisher: Jai
Price: ₹299/-



A CLARION CALL FOR CIVILISATIONAL REAWAKENING:

Swami Vignaneswaran's *Hindu Manifesto* represents a plea from a post-colonial identity to a civilisational self-awareness. It invites individuals, communities and nations to rediscover the enduring wisdom of ancient India and apply it to the pressing challenges of our times. Rooted in Dharma and guided by the principle of Integral Humanism, it offers an authentic, culturally grounded, and future-facing framework for India's development. As India rises on the world stage, this Manifesto could serve as both a mirror and a map, a mirror to reflect upon her civilisational roots, and a map to chart her journey ahead. It is a call to awaken, participate and sense, not merely as citizens of a nation, and certainly not as a minority of the West, but as rightful exponents of a living civilisation.

What is IIT-D's feat in quantum communication?

What is quantum key distribution?

What are the possible applications of quantum communications?

Tendren Madan

The story so far

In June 15, the Ministry of Defence said in a statement that IIT-Delhi, along with the Defence Research and Development Organisation (DRDO), demonstrated quantum communication over a distance of more than one km in free space.

What is quantum communication?

When two or more photons, the subatomic particles of light, are created in just the right way, measurements made on one photon will instantly determine the result for the partner photon, too – even if the photons are far apart. This phenomenon is called quantum entanglement. Quantum communication is an umbrella term for any scheme that uses the concepts of quantum physics, but especially entanglement, to make a given communication channel leak-proof. In one scheme, like the one the IIT-Delhi team demonstrated, entangled photons carry information from a source to two stations. If any third party intercepts one of the photons, the other photon will immediately be disturbed as well and the channel will be revealed as insecure. In short, quantum communication can be used to create communication channels that are protected against

The greater goal is to distribute secure keys to receivers anywhere in India by beaming photons through the atmosphere with the help of satellites.

computational attacks since any attempt to tap the quantum channel will itself be revealed. Thus they have great value in defence settings. An

important method in quantum communication is quantum key distribution (QKD).

How does QKD work?

If Bala has a message for Selvi that he wants only Selvi to receive, a simple way is to send a letter. At the address, the postal worker will deposit the letter into a mailbox. The location of the mailbox is public knowledge, but only Selvi will have the key to access it. The key is private knowledge. Receiving email works similarly: Bala will send an email to Selvi's email ID (public knowledge) and Selvi will use her password (private knowledge) to access it.

QKD is a specialised form of quantum communication whose sole purpose is to help Bala and Selvi possess identical secret keys. Once they both have the key, they can unlock and read the messages they send each other. Note that QKD doesn't encrypt the message itself; that's achieved using traditional algorithms like Advanced Encryption Standard (AES). Instead QKD helps both parties acquire the key to unlock that encryption in a secure way. There are two kinds of QKD. In the classic prepare-and-measure way, Bala prepares single photons in some predetermined states and Selvi measures them. In entanglement-based QKD, a source creates entangled photon pairs and sends one photon to Bala and the other to Selvi.

What did the IIT-Delhi team do?

The IIT-Delhi team, led by Prof. Shashir Kumar, transmitted keys through the air using entanglement-based QKD, across a distance of one km in the IIT campus. This is a step up from transmitting photons through an optical fibre. The greater goal here is to establish reliable QKD between a ground station and a satellite orbiting the earth hundreds of kilometres up. This way the satellite can distribute keys to receivers anywhere in India by beaming photons through the atmosphere. Notably, the team demonstrated "a secure key rate of nearly 340 bits per second with a quantum bit error rate of less than 1%". When the photons reach Bala and Selvi, they will measure each particle. Since they're entangled, the measurements have to match up. In this case the measurements disagreed 47% of the time, which is considered acceptable for the present scheme. Common sources of error include turbulence in the air, detector noise, and artificial lighting.

Previously, Prof. Kumar's team had demonstrated a quantum communication link between a Wadgaonchi and Prapuri in Uttar Pradesh in 2022. In 2024, they established a QKD scheme through more than 100 km of an optical fibre link.

What next?

The IIT-Delhi team demonstrated the technology in the presence of dignitaries from the DRDO, the Indian Air Force, and the Directorate of Defence Technology Management. After the event, Minister of Defence Rajnath Singh said India had "entered into a new quantum era of secure communication which will be a game-changer for future warfare." These changes entail a quantum network with multiple nodes enabling quantum communication. To help scientists develop such technologies, the Indian government approved the National Quantum Mission in 2023 with an outlay 2023-2034 of 15,000 crore. Quantum communication has important civilian applications too, especially in the banking and telecom sectors.

ADRIFT IN AMERICA

Many international students in the U.S. caught in the crosshairs of the Trump administration revoking visas are Indians. As some self-deport and others wait, the crackdowns cast a larger shadow over freedom and plurality in some of the world's top educational institutions.

Pooja Gaur

Kabir has spent the past few months running. Every morning, before the California sun begins to glare on the cracked sidewalks, he slips on his shoes and bolts out the door. The run, he says, is what keeps him sane. "It's the only time I can make a plan. What to say to the lawyer. Which papers to organize. Who to call for help." How not to fall apart.

Kabir (name changed on request), who had arrived from Pune to study at the University of California, had his student visa revoked along with thousands of others across the country. The email had come without warning. It had given him no time to prepare. Just a sudden vanishing of the ground beneath his feet. He hasn't stopped running since. "I got this news on April 2, just a day after Eid. I had wanted to go home, but couldn't in these circumstances," he says.

And now, it may be a long while before he can. His Eid kurta and suit are still on the hanger, waiting to be worn. His apartment still carries the remnants of a celebration that didn't last. A few half-deflated balloons cling to the ceiling—a bitter-sweet memory, as just a few days before his visa revocation, he had won the H-1B lottery (a random selection process by which a limited number of H-1B visas are allotted every year).

In the weeks that followed, Kabir's days became a blur—mornings on the pavement, afternoons in legal and immigration offices, evenings in community centers where other students like him sat huddled on plastic chairs, comparing legal notes, wondering what they had done wrong. Each time, the same questions, the same uncertainty, hung like static in the air.

"I run, I walk, I travel. Anything to escape my thoughts," says Kabir. And yet, they are everywhere. In the faces of the other students who are caught in the same dragnet. In a crowd stretched across a wall in Los Angeles that says, "My brother and I are my parents' American Dream."

In the eye of the storm, Kabir's story is not his alone. Thousands like Kabir have been left in limbo, their futures upended by the shifting tides of immigration law and political mood in the United States.

In March, the Trump administration announced that it was cancelling \$600 million in federal funding for Columbia University "due to the school's continued inaction in the face of persistent harassment of Jewish students" and other alleged

violations. Similar action was also directed against other Ivy League institutions such as Cornell, UConn, Harvard, Brown, and Princeton.

"We are seeing many Indian students being targeted: Megha Vermani and Prabhat Jyotsna of MIT, Karanjit Srivastava of Columbia, Indar Khan Suri of Georgetown University. This has had a chilling effect on the psyche of Indian students. They are carrying passports from the dorm to the classroom, which is not something typical. They are having conversations around what to do if ICE (Immigration and Customs Enforcement) shows up on campus," says Aidi Kumbhar, an alumna of the University of Michigan and co-president of SAATH, a community that empowers South Asian youth to drive political change.

What began as visa revocations of students who participated in or supported pro-Palestine protests had metastasized by April. Suddenly, hundreds of international students had their visas revoked. Denying student visas based on social media posting is the latest step in a quickly unraveling saga.

Columbia University and co-president of SAATH, says it is unfortunate that Indian students are targeted when they really just want to focus on their education. "Most Indian students are quite reserved when it comes to politics. They keep a low profile so that they can get their degrees, join the workforce, and make a better life for themselves," he says.

A larger ideological campaign: The Trump administration's move to ban international students has been unfolding alongside a systematic rollback of diversity, equity, and

More than 1,800 students from nearly 250 colleges in the U.S. have had their visas revoked and their SEVIS records terminated.

inclusion (DEI) programmes across the country.

In January 2025, an executive order directed all federally funded institutions to terminate all race- or gender-based diversity programmes, claiming they were in violation of anti-racism and civil rights law. Soon after the order, the Department of Education launched investigations into 45 colleges for "race-revolutionary practices". The Department of Homeland Security also imposed stricter limitations on student visas: narrower Optional Practical Training (OPT) eligibility, intensive background checks, and increased scrutiny of STEM graduates, most of whom are from countries like India and China.

According to the Community Explorer by the South Asian American Policy Working Group, a network of organisations that address policy issues affecting South Asian communities, "More than 1,800 students from nearly 250

colleges have had their visas revoked and their SEVIS records terminated without notice or due process. Only about half of them received actual notice of their visa revocations, so many might not even be aware of their visa termination." SEVIS, or the Student and Exchange Visitor Information System, maintained by the U.S. Department of Homeland Security, keeps an electronic record of the immigration status of international students and exchange visitors.

Indian students have been hit the hardest.

All these changes in the past few months, however, have not impacted all international students equally. Indian students, the largest single group of foreign students in the United States, have been hit especially hard. The American Immigration Lawyers Association estimates that 50% of those affected are from India.

In this climate of uncertainty,

international students find themselves in the crosshairs. Kabir says there was no explanation given when his visa was revoked. "We were left to guess what the issue could be." In some cases, visas were revoked because of a late fee payment, a long-forgotten speeding ticket, or an old address not updated in time. He remembers one Indian student who had his visa revoked because of a fine for catching the wrong-sized fish. "The most serious infraction by an Indian student that I came across was a DUI (driving under the influence)," says Kabir.

Normally, minor infractions don't result in visa revocation, according to Atlanta-based Sarah Hawk, Partner & Chair of Immigration and Global Mobility at Barnes & Thornburg, a business law firm. In the case of these students, often the infractions happened a long time ago and were never proven.

CONTINUED ON
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"Hinduism, it seems, is a religion of the future," said the late Mahatma. "It is a religion of the future because it is a religion of the future." — Mahatma Gandhi

There is a growing sense of urgency among Hindu leaders and scholars to address the challenges facing the religion in the 21st century. This includes the need to engage with modern science, technology, and the environment, as well as the need to address the social and economic challenges facing the Hindu community in India and around the world.

One of the most pressing challenges is the issue of caste discrimination. Despite the fact that caste is a deeply ingrained part of Hindu society, it is also a source of deep division and conflict. Many Hindu leaders and scholars are working to address this issue and promote a more inclusive and egalitarian society.

Another challenge is the issue of environmental degradation. Hinduism has a long history of reverence for nature and the environment, but in recent years, the rapid pace of industrialization and urbanization has led to significant environmental damage.

At the same time, there is a growing sense of pride and confidence among Hindu leaders and scholars in the richness and diversity of the Hindu tradition. This includes the need to engage with modern science, technology, and the environment, as well as the need to address the social and economic challenges facing the Hindu community in India and around the world.

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ADRIPT IN AMERICA

For many young people, the idea of America is a dream. It is a land of opportunity, a land of freedom, a land of hope. But for many young people, the reality of America is a different story. It is a land of discrimination, a land of inequality, a land of despair.

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He is a young man, a student at a university in India. He is a Hindu, and he is a member of a caste that is considered to be one of the lowest in the hierarchy. He is a young man who is full of hope and dreams, but who is also full of despair.

He is a young man who is full of hope and dreams, but who is also full of despair. He is a young man who is full of hope and dreams, but who is also full of despair.



The sign in the foreground reads "STEP UP FOR LIT IN AMERICA STUDIES". The people in the background are looking towards the front of the room, where a speaker is likely addressing them.

Solidarity with Harvard

The story of the student-led protest at Harvard University is a story of solidarity and courage. It is a story of a group of young people who stood up to a powerful institution and demanded change. It is a story of a group of young people who were willing to risk their future for a better future.

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ALSO POPULAR WITH INDIAN STUDENTS

| Country | 2020 | 2021 | 2022 | 2023 | 2024 |
|-----------|--------|--------|--------|--------|--------|
| USA | 10,000 | 11,000 | 12,000 | 13,000 | 14,000 |
| UK | 5,000 | 5,500 | 6,000 | 6,500 | 7,000 |
| Canada | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 |
| Australia | 2,000 | 2,500 | 3,000 | 3,500 | 4,000 |
| Germany | 1,000 | 1,500 | 2,000 | 2,500 | 3,000 |

Source: US Department of Education, Office of Education Statistics. Data is preliminary and subject to change.

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India not a magnet for global science, says Ramakrishnan

Some key pain points in Indian science are delayed release of funds every year, research scholars not being paid scholarships for as long as a year, and whimsical ways science policies are changed with little discussion with scientists

R. Prasad

With the U.S. terminating several research programmes, firing thousands of federal scientists, and cancelling important, high-value federal research grants – \$8 billion already and further cuts of almost \$18 billion next year for National Institute of Health (NIH), proposed cuts of about \$5 billion next year to National Science Foundation (NSF), proposed cut of nearly 25% to NASA's budget for 2026, and billions of dollars cut in grants to several universities – many U.S. scientists are planning to move to other countries.

According to an analysis carried out by Nature Careers, U.S. applications for European vacancies shot up by 32% in March this year compared with March 2024. A Nature poll found that 75% of respondents were "keen to leave the country".

'Not competitive'

The European Union and at least a handful of European countries have committed special funding to attract researchers from the U.S. But since the committed funding is dwarfed by the scale of funding cuts by the U.S., and the funding is already highly competitive in Europe, senior scientists from the U.S. may not move to Europe in large numbers.

"There will be a few scientists who will move, but I do not see a mass exodus. Firstly, salaries in Europe are well below those in the U.S. Secondly, moving is always difficult both professionally and personally. Finally, the U.S. is still the pre-eminent scientific country, and that will be hard to walk away from. I say this as someone who actually did move from the U.S. to England over 25 years ago, with a salary that was just over half what I was making there," Nobel Laureate Venkatraman Ramakrishnan, professor at the MRC Laboratory of Molecular Biology, Cambridge, U.K., says in an

Promise, but gaps

Nobel Laureate Venkatraman Ramakrishnan explains why India may not actually benefit from the U.S. science funding cuts:



There will be a few scientists who will move, but I do not see a mass exodus

India's R&D investment as a fraction of GDP is much less than China's and is about a third or less of what many developed countries have

Neither the funding, the infrastructure nor the general environment in India is attractive for top-level international scientists to...

• With the U.S. firing thousands of federal scientists and cancelling high-value research grants, many scientists are eyeing other countries

• U.S. applications for European vacancies shot up by 32% in March 2025 compared with March 2024

email to *The Hindu*.

In comparison, India has only a handful of institutions, such as IISc, NCBS, TIFR, IISERs, and IITs, that can possibly attract U.S. scientists. According to him, even the renowned institutions in India are "world class only in some very specific areas".

"I do not see India as a general magnet for international science," Prof. Ramakrishnan adds.

Though funding for science in India has increased in absolute terms, the percentage of GDP allocated to R&D has actually reduced. India's gross expenditure on R&D is estimated to be 0.6-0.7% of GDP in 2025. Specifically, with long-term assured funding for basic research, which is absolutely necessary to attract researchers based in the U.S., not guaranteed by existing programmes, can India take advantage of the situation in the U.S.? "India's R&D investment as a fraction of GDP is much less than China's and is about a third or less of what many developed countries have, and far below countries like South Korea. It will not be competitive without a substantial increase," Prof. Ramakrishnan says.

Lack of funding

Prof. Ramakrishnan says: "Neither the funding, the infrastructure, nor the general environment in India is attractive for top-level international scientists to

Though funding for science in India has increased in absolute terms, percentage of GDP allocated to R&D has reduced

leave the U.S. to work in India. There may be specific areas (e.g. tropical diseases, ecology, etc.) where India is particularly well suited, but even in these areas, it will be easier for scientists to do field work there while being employed in the West." Given a choice between some European country or India, he strongly vouches for Europe as being "far more attractive as a scientific destination".

Some of the key pain points in Indian science are the delayed release of funds every year, research scholars not being paid scholarships for as long as a year, and whimsical ways in which science policies are changed with little discussion with scientists. Even the Ramalingaswami re-entry fellowship, which aims to support the return of early-career life scientists with at least three years of international post-doctoral training, has faced abrupt policy changes. Currently, there are no national policies to attract senior scientists from other countries. "If India is serious about attracting Indian scientists abroad to return, it needs to provide far better incentives. China

work in India

In many developed countries, the ratio of private to public investment is almost two or more. In India, it is almost the opposite

India has a demographic dividend... However, this is a temporary advantage, and if India squanders it, it may find itself unable to be competitive in the future with other Asian countries and the West



and well-run with first-rate schools, healthcare, mass transit, and safety, and has become a desirable destination for scientists from developed countries, he adds. On the other hand, scientists moved from Germany to the U.S. and other countries in the 1930s because they were in significant personal danger.

'Temporary advantage'

To attract senior scientists from other countries and to encourage talented people already working in India, he stresses two critical aspects: scientific and social. "India needs a strong, stable commitment to science, which means not only much more funding but also more stable funding, much better infrastructure, and, just as importantly, insulating science from politics and excessive bureaucratic rules and regulations." About the social factors, he says: "The other detriment to attracting scientists (especially non-Indians) from abroad is India itself. Today, well-off Indians have essentially seceded from public spaces in India. Today, the streets are filthy and full of trash, the sidewalks are not navigable, and the air is unbearably in most cities... Which non-Indian would want that sort of life for themselves and their children?"

He is, however, full of praise and appreciation for researchers in India contributing to science despite several challenges.

"I have many scientific friends in India, and I am always amazed by how they manage to do such good work in such difficult conditions, and yet be so cheerful. Young Indians are so bright and enthusiastic, but they are being let down by the country as a whole. India has a demographic dividend – it is one of the few large countries with a youthful population."

"However," he cautions, "this is a temporary advantage, and if India squanders it, it may find itself unable to be competitive in the future with other Asian countries and the West."

Literacy is rising, but we can do better

The 80.9% literacy rate for the country, reported by the 2023-24 Periodic Labour Force Survey (PLFS), shows good progress from the 74% recorded by the 2011 census, but it also shows the challenges in the basic education system. The best performing states are Mizoram, Lakshadweep, Kerala, Tripura, Goa and Tamil Nadu. Mizoram has declared itself a fully literate state with a score of 98.2%. Karnataka has to improve its performance as it does not figure in the top 10 states. The New India Literacy Programme (NILP), started on April 1, 2022, to improve literacy among adults, has achieved some results but the focus of the country's literacy programme has rightly been on school education.

Importantly, the report shows that the implementation of the universal literacy programme is hindered by many persisting inequalities, mainly along gender and regional lines. A literacy level of just over 80% is inadequate in a country of 140 crore people. The literacy rate is significantly higher in urban areas than in rural areas. This rural-urban gap exists in all states, and it is caused by uneven distribution of educational infrastructure. Serious gender disparities also exist, with male literacy significantly outpacing female literacy in several states. The national average for men is 87.2% and women 74.6%. Though girls do well in school, many are not even sent there, and among those who do make it, a good number drop out early. Bihar, Madhya Pradesh and Rajasthan are the worst achievers in overall literacy, and the gender literacy gap in those states is between 16 and 20%.

Disparities persist, with states such as Bihar, Madhya Pradesh and Rajasthan faring poorly

The top states show what good strategy, persistence, community support, and outreach can do for basic schooling. The states at the bottom, such as Bihar, show the inadequacy of governance and infrastructure. They also highlight how social, economic and cultural hurdles affect literacy plans and objectives. Every state needs strategies suited to its milieu. Laggard states need to pay greater attention to their literacy levels because, by keeping large sections of the people illiterate, they are pulling down not just themselves but also the nation. An illiterate population is a demographic liability as illiteracy has high economic and social costs. A high literacy percentage is not enough. Education should improve from basic levels to the highest levels for it to result in true empowerment.

John I. Kennedy

Academic brilliance was once defined by the depth of scholarship, rigorous institutional processes, and a culture of inquiry nurtured by universities. Today, the focus has shifted to metrics, badges, and rankings. Institutions showcase it, scholars highlight it, and stakeholders treat it as a seal of quality. Yet, as with all that glitters, one must ask: what lies beneath?

Today, Stanford is gaining recognition, alongside THE and QS rankings, despite the inherent flaws in all three. The Stanford ranking, for instance, seeks to identify the top 2% scientists in various disciplines based on a composite indicator. This includes bibliometric indicators such as total citations, h-index, co-authorship-adjusted metrics, and citations to papers in different authorship positions. While it appears scientific and data-driven, the exercise is not without flaws.

For one, it depends entirely on Scopus data, a commercial database that does not cover all disciplines equally. Humanities and some Social Sciences are grossly under-represented, leaving a large swath of global academia invisible in the analysis. Moreover, the focus on citation-based metrics incentivises quantity over quality. A well-written, widely-cited review paper can push a researcher up the ranks, while a game-

Meaning over metrics

By focusing on rankings, our current education model equates visibility with value and reputation with reality.



changing monograph in philosophy may not even register. What makes it even more problematic is the blind application of these rankings by institutions. Without context, nuance, or disciplinary sensitivity, they are turned into marketing tools. It is less about a commitment to excellence and more about optics and prestige. The ranking becomes currency; a transactional marker to attract funding, students, and media attention.

Indian context

In India, the situation is more troubling. The National Assessment and Accreditation Council (NAAC) has come under intense

scrutiny after the recent revelation of a university in Andhra Pradesh allegedly paying crores to secure an A++ grade. Shockingly, nearly 20% of NAAC assessors were later removed due to various irregularities. The demand for a comprehensive probe into the assessments conducted by these discredited evaluators is reasonable and urgent. In recent years, many institutions have managed to secure top grades, which many argue is inconsistent with the ground reality of poor infrastructure, faculty shortages, and abysmal student outcomes. This raises a troubling question: Have we reduced institutional quality to a game of stra-

tegic networking, financial leverage, and performative documentation?

One cannot ignore the systemic pressures at play. The increasing corporatisation of academia has introduced market logic into the university system. As public funding shrinks, universities – especially private ones – are forced to rely on student fees and external rankings to remain afloat. This leads to a dangerous feedback loop: To attract students, institutions ease academic regulations, reduce penalties for indiscipline, and adopt student-centric policies that often border on appeasement. Faculty, burdened with teaching, administrative tasks, and

publication requirements, face burnout. In such an environment, rankings become not just desirable but necessary. They are wielded as shields in an ever-intensifying battle for survival. Institutions chase Scopus-indexed journals to meet regulatory demands, not for the love of scholarship. Researchers pay exorbitant fees to get published and, when that fails, some resort to unethical practices, only for their papers to be retracted later.

Flawed model

In this matrix of manipulation, it is easy to blame the institutions. But the deeper malaise lies in the very education model we have embraced: one that eq-

uates visibility with value, metrics with meaning, and reputation with reality. Awards, too, have not been spared. Today, one can pay a tidy sum and receive an "Excellence in Research" award in a foreign country with a sightseeing tour and conference pass thrown in. These packages are marketed as academic opportunities but are, in truth, commodified experiences engineered to inflate CVs. We must ask: did our finest institutions of yesteryear depend on such scaffolding?

The situation may seem bleak, but not hopeless. To reverse the tide, we need to recalibrate our priorities. First, we must advocate for more context-sensitive and peer-reviewed models of assessment that go beyond metrics. Second, public funding for education must be restored and enhanced. The commodification of education is not an inevitable outcome; it is the result of deliberate policy choices. Third, academia must reclaim its soul. Universities are not businesses, and education is not a product. Rankings can be tools, but they must not become our tyrants. The rot will deepen until we resist the seduction of easy prestige and short-term gains. It's time to stop asking how to climb the ranks and start asking how to make learning meaningful again.

Views are personal

The writer is a retired professor and former Dean, School of Arts and Humanities, Christ Deemed-to-be University, Bengaluru.

GETTY IMAGES/ISTOCKPHOTO

How will foreign universities impact higher education?

What opportunities and prospects do foreign universities see in setting up campuses in India? Why are universities abroad dependent on international students? What are some of the challenges they will face?

Pushkar

The story so far:

Several foreign universities are setting up branch campuses in India. So far seven universities from the U.K., five from Australia, and one each from the U.S., Italy and Canada are in the process of obtaining necessary approvals or have done so already. Most will be located in GIFT City and Navi Mumbai. While India has been interested in attracting foreign universities for more than a decade, the 2020 New Education Policy (NEP) revived it and the government subsequently approved the UGC (Setting up and Operation of Campuses of Foreign Higher Educational Institutions in India) Regulations, 2023 (9180).

Why are foreign universities coming?
The countries of the Global North

embarked on a massive expansion of higher education in the post-Second World War years to accommodate the growing number of young people headed to college. Over time, however, with falling birth rates, domestic enrolments started to plateau and then fall. By the early 21st century, the physical infrastructure and human capital of higher education institutions (HEIs) was too large for the diminishing numbers. This, along with cuts in public spending on higher education, started to create financial challenges. The solution was found in admitting larger numbers of international students who could be charged substantially higher tuition fees.

In 2023, international students represented 22% of total enrolments at U.K.'s universities, 24% in Australia and 30% in Canada. Though only 6% of enrolments at U.S. universities are international students, they make up for

27% of students at Ivy League schools. Universities in all "big four" host countries – Australia, Canada, the U.K. and the U.S. – have become financially reliant in varying degrees on international students. Over the past year, however, there has been a blowback. Australia and Canada have capped their international student numbers. In the U.K., new rules introduced in 2024 reduced the number of student visa applications. These restrictions are hurting universities. Redundancies have become widespread in the U.K., Australia and Canada. Therefore, many universities are looking to India to compensate for the reduced numbers of international students at their home campuses and to diversify their revenue sources.

What are some of the challenges?
India's young population and a relatively low but steadily rising gross enrolment

ratio of just under 30% offers immense opportunities. However, branch campuses in other parts of the world – in China, Southeast Asia, and West and Central Asia – have a mixed record. There are several instances where they have lost money and exited. India will not be a walk in the park either.

First, India's higher education market is large in terms of student numbers – 40 million+ – but smaller in terms of the cost that an average student or family can afford. However, India is a growing economy and in the coming years, more people will be able to afford a relatively expensive college education. Second, India lacks a sufficient number of good quality HEIs. Beyond a small number of public and even fewer private institutions, the majority are average to mediocre. Branch campuses will offer better quality education than the majority of HEIs. Third, while many Indians aim to study abroad in order to emigrate, there are others who intend to work in India. Branch campuses will offer these students the option of a foreign degree at home.

The immediate to medium term impact of branch campuses can be expected to be limited. Even if a dozen or two of them are set up, their total student intake will be small. The response of Indian students to branch campuses in the first few years will be crucial to what happens next.

Pushkar is director, the International Centre Goa (Ugc), Dona Paula. 6/23/25

THE GIST

The countries of the Global North embarked on a massive expansion of higher education in the post-Second World War years to accommodate the growing number of young people headed to college.

Universities in all "big four" host countries – Australia, Canada, the UK and the US – have become financially reliant in varying degrees on international students.

India's young population and a relatively low but steadily rising gross enrolment ratio of just under 30% offers immense opportunities.

Blended Learning: Driving educational transformation

We are living in an era of education that is creating enabling circumstances for students and working professionals, and in which blended learning would be a key game-changer. Within India, the implementation of the National Educational Policy of India (NEP) 2020 is going to revamp the teaching-learning process in India. The vision of NEP 2020 is to reimagine the Indian education system aligned with SDG 4, which focuses on equal opportunity, inclusion and equity. Blended teaching-learning environments, Open Educational Resources (OERs) under Creative Commons (CC) and Massive Open Online Courses (MOOCs) are essential requirements to build a strong Indian education ecosystem across regions and socio-economic strata. An online survey has been conducted among academic communities including students, faculty members, and library professionals to know the perception during the defence of my doctoral thesis. The survey revealed a low level of awareness among students and faculty members about unconventional learning opportunities and resources that leverage IT infrastructure like online courses which provide access to a large number of students to the latest technical skill enhancement courses. Encouragingly and somewhat expectedly, faculty members surveyed displayed a higher awareness of these matters relative to students or even library professionals. It emphasised that when faculty members incorporate OER educational resources into traditional classroom settings, the quality of OER resources improves, hence enhancing the overall quality of online education. The various stakeholders were found to have the view of integrating OERs with the Library Management System (LMS) and having a strong OER policy framework in the HEIs in India. The favourable views of stakeholders towards integrating OERs with LMS should enable the academic community to gain a better understanding of the culture of open-access licenses and blended learning environments. This is therefore an opportunity to speed up blended learning education, particularly among the peri-urban population and disadvantaged communities living in remote areas. As per 'All India Survey on Higher Education (AISHE) 2021-22', the distance enrolment mode in Bihar and Assam is one of the lowest despite high population growth and the people are keen on higher education and have little access to direct university enrolment within the state. This is important for climate literacy and climate education.

The actual adoption of OERs by Higher Educational Institutions (HEIs) depends upon various factors such as - time and cost, languages, user-friendliness, infrastructure, quality and library support. The evolution of pedagogical practices is linked to the awareness of Open Educational Resources

(OERs), which facilitate the integration of OER materials into traditional teaching methods during in-person classes. Furthermore, Governmental support would augment the utilisation and advancement of OERs at higher education institutions and facilitate the bridging of disparities between information-rich and information-poor entities through high-quality open educational resources, aligning with one of the aims of Sustainable Development Goal #4.

The aim of NEP 2020 is to empower students/learners to inculcate diversified skills by permitting them to pursue two degrees simultaneously. In theory, such flexibilities should empower not only students but potentially the entire workforce for future needs while enabling holistic approaches to education. However, this goal cannot be efficiently achieved and scaled up to address current needs through the conventional classroom pedagogy with its attendance mandates. Rather, it requires a softer and digital approach wherein online learning can be brought to par with regular classroom learning.

Consequently, digital educational resources, online education, Artificial Intelligence (AI) technology, and virtual reality can interact to address the necessity for a transformation in the education system in the present and future eras. This initiative assists students from diverse backgrounds in comprehending the interdisciplinary nature of education while providing extensive exposure to various tools and strategies of online learning. This exposure aids in the development of knowledge to tackle challenges at local, regional, and global levels, and to devise solutions aimed at achieving the UN Sustainable Development Goals in a meaningful manner. Enhance leadership skills in their particular fields and interdisciplinary areas to improve decision-making acumen and also help them to map with all SDGs and national missions of the country. The Government of India's efforts towards establishing a Digital University with the integration of existing OERs-based capabilities such as SWAYAM-Prabha, Swayam, ePG-Paathshala, Virtual labs and the National Digital Library etc. will be a landmark transformation for the entire Indian education system. Finally, we can play vital roles in integrating existing library management systems, catalogues and resources with online educational platforms to promote lifelong learning in the student community as well as society at large. Effective implementation of a blended learning education system with adequate cybersecurity measures and timely technological upgrades can go a long way in the achievement of SDG 4 by providing 'inclusive and equitable quality education and promote lifelong learning opportunities for all'.



**RATAN
KUMAR JHA**

(The writer is Assistant Librarian at
TERI School of Advanced Studies. Views are personal)

Pro/ 23/7

The Statesman

*Incorporating and directly descended
from THE FRIEND OF INDIA - Founded 1818*

Policing Classrooms

In an increasingly interconnected world, the boundary between national security and academic freedom is becoming more blurred than ever. The recent tightening of US student visa procedures signals not just a policy shift, but a deeper transformation in the way America views the global exchange of talent, ideas, and youth. At the heart of this development is a broadening suspicion of foreign students – once welcomed as contributors to innovation and economic strength, now viewed with caution as potential ideological or security risks. The new demand that all student visa applicants make their social media accounts public for vetting is both revealing and unsettling. It suggests that the private digital lives of young scholars are no longer immune from official scrutiny. What one posts – or chooses not to post – could well determine their academic future in the United States. A private account might simply mean a desire for personal space, but under these new rules, it could be interpreted as concealment, non-cooperation, or worse, hostility. This shift is not happening in isolation. It fits within a broader context where foreign students, especially those from certain regions or expressing certain views, are increasingly seen as soft threats. The screening for "hostility toward the citizens, culture, government, institutions, or founding principles of the United States" is a wide net – so wide, in fact, that it risks catching opinions or expressions that fall well within the bounds of democratic discourse or cultural difference. One can understand any country's need to protect itself from genuine threats. In an age of cyber warfare, misinformation, and ideological radicalisation, vigilance is necessary. But this sweeping expansion of vetting also raises uncomfortable questions about proportionality, fairness, and long-term consequences. Will cautious foreign students now censor themselves online? Will they choose other countries for higher education – nations that do not require them to lay bare their digital identities? The economic implications cannot be ignored. More than a million international students contribute billions of dollars to the US economy every year. They fill university coffers, support research, and invigorate industries ranging from housing to technology. A less welcoming visa regime – or even the perception of hostility – could prompt a slow but steady diversion of this talent flow to other education hubs in Europe, Canada, or Australia. A climate of suspicion in academia rarely stays confined. It seeps into research partnerships, cross-border collaborations, and intellectual trust between nations. When every foreign student is a potential risk rather than a potential partner, the spirit of open inquiry begins to shrink. In a telling side note, these measures coincide with political crackdowns on elite universities over perceived ideological bias – suggesting that this is as much about domestic culture wars as it is about foreign policy. A policy designed to ensure safety may, paradoxically, undermine the very openness and dynamism that make American higher education so attractive in the first place. 22/6

Unpacking the Meo conundrum in Nuh district's education crisis

OPINION

NAVNEET SHARMA AND
FURQAN QAMAR

As the 12th Class results of the Haryana Board of School Education of 2025 were announced, one of Haryana's districts again found itself at the centre of attention for all the wrong reasons. It's Nuh district, formerly known as Mewat, recorded the lowest pass percentage in the state — a mere 45.76 percent, a significant decline from the previous year's 56.83 percent.

The issue, however, goes far beyond examination scores. It draws attention to deep-seated socio-economic inequalities, systemic policy failures, and stubborn stereotypes that have long burdened the region. This is not as much the story of students failing in the board examination year after year as it is about the inability of the administration to address the issues concerning systemic failures.

The district's dismal educational performance is neither new nor accidental. A similar story, with marginal differences of degree, unfolds year after year. Yet, the causes of gross underperformance remain to be addressed with the nuance and empathy they deserve.

This year's results came with a peculiar twist — the crackdown on mass copying.

Organised cheating rackets flourished in the region for years, with local middlemen facilitating malpractices during examinations. Reportedly, parents used to pool as much as Rs. 2 lakh to channel the accumulated sum to *thonda*, a kind of people with influence, to ensure that their children are allowed to use unfair means.

This year, however, that was not to be. The administration came down heavily on such malpractices. This is claimed to have exposed the raw state of learning in schools, leaving many students unprepared to face exams on merit. While some parents viewed this as a wake-up call, others lamented the loss of a well-established 'alternative route.'

The administration deserves all appreciation for taking measures to eliminate professional misconduct in the board examinations. What must, however, be condemned is the media's frenzy to present the whole issue through a communal

lens by attributing the region's poor performance to its predominantly Muslim population, a claim both dangerous and baseless.

Undoubtedly, four-fifths of Nuh's population comprises Meo Muslims, a Muslim minority community that represents a uniquely distinct socio-cultural group blending elements of Hindu and Islamic traditions. Reducing their educational backwardness to religious disinterest is simply ridiculous and a grave injustice.

The district and community's poor showing in the board examinations can be explained only by the school education's chronic underinvestment and systemic neglect. Haryana has a literacy rate of 75.5 percent. Nuh, in sharp contrast, is condemned with a mere 54.08 percent. Notably, the Gurgaon or Gurugram, a gleaming tech hub located just 60 kilometres away, has a literacy rate of 84.7 percent.

The Pupil-Teacher Ratio (PTR) in Haryana, at the secondary level of education, averages around 1:15. In contrast, in Nuh, it alarmingly stretches to 1:62. Even at primary and middle levels, the PTR remains as adverse as 1:56 and 1:60 respectively, leaving students with little chance of receiving personal attention or quality instructions.

The gender disparity within Nuh, as compared to the rest of Haryana also reflects bipolarity. The fe-



A similar story, with marginal differences of degree, unfolds year after year. Yet, the causes of gross underperformance remain to be addressed with the nuance and empathy they deserve. This year's results came with a peculiar twist — the crackdown on mass copying.

male literacy rate in Nuh was just about 37 percent as compared to the male literacy rate of 73 percent. The Gross Enrolment Ratio in Nuh hovers at around 78 percent, comprising 56 percent boys and 44 percent girls. Among the 6748 teachers in Nuh, the male teachers account for 72 percent, with only 28 percent being female teachers.

Economic disparities fur-

ther compound the problem. The 2022-23 Economic Survey pegs Haryana's per capita income at Rs. 2.97 Lakh, significantly higher than the national average of Rs. 1.27 Lakh. The per capita income of Nuh for the year could not be ascertained. It should, however, suffice that in 2011-12, when Haryana's per capita income was Rs. 1.06 Lakh, the per capita income of Nuh was

only Rs. 46,000. The educational inequity could be both the cause and consequence of this economic marginalisation.

These ratios narrate what is wrong with the school system at Nuh and need no further justification for why students cannot clear board exams with flying colours.

In 2012, the Haryana government introduced the 'Mewat Cadre' policy to recruit teachers exclusively for the region, hoping to address the teacher shortage and reduce frequent transfers. While well-intentioned, this policy backfired.

It inadvertently became a dumping ground for candidates who could not secure posts in other districts. Furthermore, teachers recruited under this cadre cannot be transferred elsewhere, reducing incentives

for professional development and quality improvement. Instead of bridging the educational divide, the policy institutionalised mediocrity, with little accountability. The result was poor learning outcomes.

Nuh's education ecosystem is also characterised by the widespread presence of Madrasas, but these can't be the reasons for the poorer educational attainments of the inhabitants, for the district has only 77 Madrasas catering to only about 9,000 students.

Significantly, 89 percent of the parents whose children were studying in Madrasas in the Nuh district of Haryana desired a change in the curriculum and wished that Madrasas could offer modern education.

Most importantly, however, nearly 98 percent of par-

ents whose children were studying in the government schools were found concerned about the quality of education that their children received.

These statistics reflect not only the apathy towards education but also the extent of unmet aspirations. The problem is not as much associated with parental indifference as to the lack of credible, quality educational alternatives.

The Meo conundrum in Nuh is not a question of whether its children want to learn, but whether the system provides them the means and opportunities to do so. To frame their educational challenges as an issue of religious apathy is not just unjust — it distracts from the real, actionable issues at hand.

Nuh's crisis is symptomatic of when development narratives exclude peripheral regions and marginalised communities. It is a stark reminder that fair exams alone won't fix a broken system. Only sustained, inclusive, and empathetic reforms can ensure that the children of Nuh are no longer left behind in Haryana's story of progress.

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Let's be proud, not ashamed of English

STANLEY CARVALHO

The recent remarks by Home Minister Amit Shah against the English language and linking it to shame are unfortunate and regressive and smack of linguistic chauvinism in a diverse country such as India. The remarks come amid a row in some states that are accusing the Centre of imposing Hindi as part of the National Education Policy's (NEP) three-language formula.

Speaking at a book launch in New Delhi, Shah said that those who speak English in India would "soon feel ashamed" and that the creation of such a society was not far away. He also underscored that native languages were central to India's identity and English would be frowned upon as a symbol of colonial slavery across the world.

Before one delves into the significance of English and its role in India, it is crucial to emphasise that some colonial legacies have persisted in India even after 77 years due to a combination of factors, including their perceived utility, the setting up of institutions that favoured these practices and their social and cultural integration into Indian life.

So, should we be ashamed of these "symbols of colonial slavery" that could include not only English but also the game of cricket that has become a deeply ingrained part of Indian culture, even outsmarting the coloniser? What about other colonial legacies such as golf, the many clubs, the vast railway network, the administrative and legal systems, etc.?

Coming to English, love it or loathe it, you cannot ignore it; English has willy-nilly emerged as a link language in India, acting as a unifying factor across India and the world. One could perhaps say it has almost become another Indian language.

According to the 2011 census, only 43.6% of Indians reported Hindi as their mother tongue. About 57% of Indians are estimated to be able to speak Hindi functionally. Hence, to connect with the rest of India and for government-related official purposes, a common language is necessary, and English has served the purpose all along.

If India is a superpower in information technology (IT) today, it is because of the large pool of English speakers working in this sector and who are globally competitive, a clear advantage we have over countries such as China.

Our constitution is also drafted in English, and the government-established Sahitya

Akademi gives out awards annually to those writing in English.

More recently, India sent seven delegations on a diplomatic outreach mission to 32 countries to convey India's resolve to tackle terrorism. The members, picked from different political parties, were largely English-speaking politicians.

English has become an aspirational language in India, the path towards better education, jobs and progress. Even those working in informal sectors, such as domestic workers, street vendors and construction labourers, send their children to English medium schools. We should be proud of this, not ashamed.

In nearly all the southern states as well as in Delhi, Haryana and Punjab, there are more children in English-medium schools than in vernacular schools, according to a report by the Unified District Information System for Education (UNDISE).

Given its status in India and globally today, it is imperative that English remains a medium for communication and continues to serve as an important link language given the linguistic diversity of India.

Of course, while students should have the right to pick the languages of their choice, they should also be encouraged to learn different languages.

Moreover, the government must rise above narrow-minded politics and embrace inclusivity by giving equal importance to the many languages across India and not enforce Hindi in the name of national unity.

Tamil Nadu, which has been at the forefront of the clash with the Centre, has claimed that the BJP was using the NEP not to improve education but to secretly push Hindi. West Bengal too has criticised the BJP over the issue.

In fact, some believe the minister's remarks are a furtive way of imposing Hindi all over India. As Dalit rights activist Kancha Illiah Shepherd said, it's part of the RSS-BJP's larger ideological plan, which has long pushed the idea of one language, Hindi, for one nation. "They're uncomfortable with how English empowers Dalits, Adivasis, and the poor. English is liberating, and it opens global doors. That's what scares them. If India becomes more English proficient, caste hierarchies will weaken."

Science, technology, diplomacy — they all operate in English. Why else would S Jaishankar be our foreign minister? "Because he speaks fluent English, not just Tamil or Hindi," he told *The Federal*.

(The writer is a Bengaluru-based independent journalist)

20/24/9

To lead globally, India must not just invite R&D global excellence – it must be ready to host it

STEM the Tide for Research



Sheel Kapoor & Aditya Sinha



For starters, you'll have to make better offers than that

In 1950, the US made a radical wager: that funding curiosity — unapologetic curiosity — through the installation of the National Science Foundation (NSF) could change the world. The payoff was immense. For every \$1 of public research funding, the US economy gained between \$1.50 and \$3. Over 260 NSF grant recipients went on to become Nobel laureates.

Cut to 2025. The US has proposed a 56.9% cut to NSF's 2026 budget — even as last Friday a federal judge blocked the move — eliminated over 1,400 grants worth more than \$1 bn, and slashed graduate science fellowships by half. In real terms, this means 46,000 jobs lost, and a \$6.1 bn hit to GDP through supply chain effects and declining R&D demand.

Efficiency concerns are prompting the US to cut back on scientific research. A March 2025 Nature survey shows 75% of US-based scientists, and 79% of post-graduate and PhD students are considering leaving the country. This moment is India's opportunity.

With less than 0.7% of GDP spent on R&D and 15 researchers per 1 lakh people (compared to 423 in the US and 1,307 in South Korea), India is underbuilt, but not incapable. If India reforms its institutions, funds bold research and builds real pathways for global talent, it can become not just the world's back office but also its brain. The question isn't whether top minds will leave the US, but where they'll land.

China has been years ahead in recognising that talent is the new oil. Through flagship programmes like Thousand

Talents Plan (TTP) and Young Thousand Talents (YTT), China has systematically built a global pipeline for high-end scientific talent. TTP offers extraordinary incentives:

- ▶ A one-time bonus of 1 mn renminbi (\$140,000), 3-5 mn renminbi in research grants, housing subsidies, relocation allowances and access to senior roles in academia and industry. By 2017, TTP had recruited over 7,000 high-calibre professionals, including Nobel laureates and faculty from MIT, Stanford and Oxford.

- ▶ Sent out 3,500 offers between 2011 and 2017, targeting PhDs from the top 100 STEM universities. A January 2023 study in Science, 'Has China's Young Thousand Talents program been successful in recruiting and nurturing top-calibre scientists?', found YTT awardees averaged 2.39 publications a year and ranked in the top 15% of Chinese-origin US researchers by productivity.

In May, the EU launched a €500 mn (\$576 mn) 'Choose Europe for Science' campaign aimed at attracting global scientific talent between 2025 and 2027. The initiative offers super grants with relocation bonuses and longer contracts. France has pledged €100 mn (\$115 mn) under this framework, alongside a separate 'Choose France for Science' co-funding platform. This investment comes as the EU seeks to reverse its declining share in global research output, calling on member states to commit 3% of GDP to R&D by 2030.

India has instituted a range of talent-return and international collaboration programmes, including the Ramanujan Fellowship, VAIJRA (Visiting Advanced Joint Research), VAIBHAV (Vaishwik Bharatiya Vaigyanik), SIRE (Science and Engineering Research Board International Research Experience) and GETIn (Genome Engineering/Editing Technologies Initiative), to integrate diaspora scientists and enhance domestic R&D capabilities.

However, these schemes have challenges:

- ▶ They are fragmented across ministries.
- ▶ Structurally most programmes are fellowship-based with finite tenures, lack tenure-track conversion mechanisms and fail to offer institutional integration or strategic roles within national labs.
- ▶ Funding levels — typically ranging between ₹5,000 and ₹1.35 lakh a month — with modest research grants, are insufficient to attract global talent or bring Indian researchers back.
- ▶ Lack of state-of-the-art lab infra, especially outside IISc and IITs, undermines India's competitiveness as a research destination. Returnee scientists often face asymmetric institutional conditions, like outdated equipment, poor administrative support and rigid procurement protocols.
- ▶ Administrative inefficiencies are common deterrents, such as delays in grant disbursement, compliance burdens and lack of autonomy in fund utilisation.
- ▶ Cultural resistance within host institutions, coupled with absence of struc-

tured onboarding, inter-institutional mobility or peer networks, has often isolated returnees.

▶ Absence of a mission-oriented innovation agenda means returnees are not embedded in coherent national-level grand challenges.

But India's scientific ecosystem has begun to witness a quiet revolution, with momentum accelerating. There is a concerted effort by several ministries towards bringing in reforms for the ease of doing research. Anusandhan National Research Foundation (ANRF) marks a foundational shift in how the country approaches research funding and governance. It's centralising fragmented efforts and introducing coherence across disciplines.

ANRF aims to become the backbone of India's R&D architecture. New funding mechanisms, like the Advanced Research Grant (ARG), are being introduced. It's designed to serve as a stable, long-term 'bread-and-butter' grant for Indian scientists. Simultaneously, critical financial reforms are under-

China has been years ahead in recognising that talent is the new oil. Through Thousand Talents Programme, it has systematically built a global pipeline for high-end scientific talent



way to make research more frictionless. These include streamlining fund disbursement, easing utilisation norms and granting greater autonomy to institutions.

But India must seize this rare moment to launch a unified, mission-driven, talent-attraction programme targeting researchers from the world's top 100 STEM institutions. The lure of being back home must be supplemented with state-orchestrated efforts.

Fragmented, short-term schemes are no longer sufficient. What's needed is a cross-ministerial effort aligned with national innovation priorities and backed by investment in cutting-edge lab infra. To lead globally India must not just invite excellence — it must be ready to host it.

Kapoor is CEO, FAST India, and Sinha is a public policy professional

07/2025

Go On, Pop the Innovation Pill



Sheetal Arora

CEO, Mankind Pharma

Rollout of the ₹5,000-cr Promotion of Research and Innovation in Pharma MedTech Sector (PRIP) scheme signals a shift in how India approaches the sector's growth. This initiative, expected to begin disbursements by the end of 2025, could attract ₹17,000 cr in additional R&D investment. For an industry that has long been associated with generic manufacturing, this represents a paradigm shift towards innovation-led growth.

The pharma world is approaching a 'patent cliff', and for Indian firms, it represents an unprecedented opportunity: 24 mega-selling drugs with combined annual sales exceeding \$250 bn will lose patent protection by 2030. This means blockbuster medicines like Humira for rheumatoid arthritis, Keytruda for cancer treatment, Stelara for psoriasis, and Symbicort for asthma will soon be open for generic manufacturing.

When these patents expire, drug prices fall by at least 50%. For a country where out-of-pocket (OoP) healthcare expenses are high, this holds immense significance alongside its commercial potential.

Capturing these opportunities won't

be easy. Indian firms will face tough competition from generics and must match the original drug standards. Success will hinge on investment in bioequivalence studies, regulatory compliance and resilient supply chains.

Indian pharma companies are eyeing these opportunities. Zydus, Sun Pharma, and Bharat Serums and Vaccines (now part of Mankind Pharma) have invested in establishing world-class R&D centres, focusing on developing new chemical entities. The younger generation of scientists and entrepreneurs, bringing fresh perspectives, is accelerating the transition from a generic-focused industry to one that balances both generic excellence and innovative drug discovery.

MNCs are also rethinking their view of the Indian market: Novartis, Novo Nordisk and Eli Lilly have chosen to out-license their brands to Indian firms rather than directly market them here. This trend reflects both the growing



Stir things up

capabilities of domestic firms and the unique challenges of serving India's diverse and price-sensitive market.

These partnerships benefit all. International companies can maintain a presence in India without the complexities of direct operations, while Indian firms gain access to established brands and molecules, leveraging deep market understanding and extensive distribution networks. However, building these relationships requires investment in compliance systems, quality infrastructure, and continuous capability upgrades to meet the exacting standards of international partners.

Other positives in the sector include:

► Exemption of 36 life-saving drugs from basic customs duty will benefit companies bringing in innovative medicines. Drugs like AstraZeneca's Selumetinib, Pfizer's Lorlatinib, Novartis' Ribociclib, and GSK's Mepolizumab will now be more affordable. Additionally, six more life-saving medicines have been added to the concessional 5% duty slab, primarily targeting cancer, rare diseases and other chronic conditions.

► The health budget has risen to over ₹95,000 cr for FY26, up 9.46%. More than a numbers game, it's about building a healthcare ecosystem fit for our vast population.

► 15,479 Jan Aushadhi Kendras provide generic medicines at prices up to 80% lower than branded equivalents.

A heart medicine that once cost ₹500 is available for ₹100, bringing essential treatments within reach of ordinary citizens. Yet, ensuring consistent quality and maintaining reliable supply chains remain a challenge.

► Extension of PM Ayushman Yojana to people above 70 years creates a virtuous cycle—more people seeking treatment drives demand for medicines, which, in turn, encourages pharma companies to invest in better products and wider distribution.

► Development of healthcare infra in tier-2 and tier-3 cities is also helping. However, attracting and retaining qualified medical professionals in these locations remains a hurdle, requiring innovative approaches to compensation, career development and quality-of-life considerations. Again, the market for pharma products will, then, be able to expand.

► A 'nutraceutical revolution' is underway. With the market expected to grow from \$4 bn in 2020 to \$18 bn by December, nutraceuticals represent a significant growth avenue for companies willing to invest in quality and innovation.

The convergence of multiple factors—patent opportunities, GoI support, infrastructure development and changing consumer behaviour—is creating unprecedented opportunities for the sector. Companies that embrace innovation, while maintaining traditional strengths in affordable healthcare delivery, will thrive.

The writer is CEO, Mankind Pharma

27/24/6

Battle against salt must begin with school meals

Salt in Indian diets holds a special place, not just in our kitchens, but also in our history, language and even politics. It was salt, after all, that Mahatma Gandhi chose as a symbol of resistance against British colonial rule. Even today, the phrase "*namak ka farz*" (the duty of salt) speaks to a deep cultural association between salt and loyalty, sacrifice, and trust. But while salt is rich in symbolism and tradition, it's also quietly contributing to a serious health crisis in India today.

Excess salt consumption is a major contributor to high blood pressure, which significantly increases the risk of hypertension, cardiovascular diseases (CVDs) and other non-communicable diseases (NCDs). NCDs have contributed to more than 60% of all deaths in India over the past decade, with CVDs constituting a quarter of these diseases. Hypertension is a leading cause of the problem, given that approximately one in four Indian adults suffers from the condition.

This crisis is not just limited to adults. The Comprehensive National Nutrition Survey (CNNS) (2016-18) found that 5% of Indian adolescents between 10 to 19 years old are hypertensive. This is a concerning statistic, as children with hypertension have about seven times higher odds of developing hypertension in adulthood. Moreover, dietary habits formed early in life tend to persist, excessive salt consumption during childhood can shape taste preferences, making children more likely to prefer salty foods later in life. Research indicates the typical daily salt intake for Indians ranges from 8-11 grams of salt. This is double WHO's recommended daily salt intake of less than 5 grams. The recommended intake for children is below 4 grams of salt.

Against this backdrop, a compelling strategy to address this silent crisis is to improve what children eat at school. PM Poshan (Pradhan Mantri Poshan Shakti Nirman), India's critical school meal programme, provides cooked meals daily to 118 million students across 1.12 million schools. Each PM Poshan meal accounts for 25-30% of a child's daily nutritional requirements, making it important to ensure that they are wholesome and nutritious. Initiatives like school nutrition gardens, or Poshan Vatikas, under the scheme are a positive step, encouraging the use of fresh ingredients and healthier food habits.

School meals can be made healthier by reducing salt, a key proposed policy interven-

tion outlined in the National Multisectoral Action Plan to combat NCDs (2017-22). This will help achieve India's national goal to cut population-level salt intake by 30% by 2025. While PM Poshan guidelines specify nutritional norms for calories, proteins and various food groups, they offer a broad recommendation to add salt "as per taste". Introducing standards to require a gradual reduction of salt in PM Poshan will help reduce salt intake among school children and also modify their taste towards low salt food.

Globally, countries are adopting comprehensive strategies to make public food healthier. These include limiting the use of ultra-processed foods, and prioritising fresh, nutrient-rich ingredients in public food programmes. These experiences exhibit success stories in ensuring



Urvashi Prasad

healthy public food procurement. Singapore mandates lower-sodium menus across government institutions. In Brazil, school feeding programmes emphasise fresh, minimally processed foods while reducing ultra-processed ingredients. Chile has introduced front-of-pack warning labels and prohibits high-sodium foods in school kiosks. India, too, has a well-designed school meals policy that

reflects many of these principles, such as the use of fortified staples, provision of mid-day meals, and adherence to nutritional guidelines. The impact of these provisions could be further strengthened through consistent implementation and enforcement of FSSAI's regulation on promoting healthy food environments in schools by restricting the availability and marketing of foods high in saturated fats, trans fats, added sugars, and sodium (HFSS).

As a first step, we must set clear, age-specific salt standards at the population level, beginning with PM Poshan. There should be no ambiguity about how much iodised salt is appropriate for children of different age groups. Equally important is involving parents and caregivers in this effort since children's taste preferences are shaped not only in schools and *anganwadis*, but also at home.

This is a moment for the ministries of education and health to come together to develop and implement guidelines on salt consumption for children. Ultimately, this isn't just about cutting down on salt. It's about reimagining public health, starting with what's served on a child's plate.

Urvashi Prasad was director, Niti Aayog.
The views expressed are personal.

WRITING WITH MACHINES

A new MIT study points to the adverse effects of writing with ChatGPT. The picture is more complicated

FROM AT LEAST the mid-15th century, with the invention of the printing press, a wave of anxiety has accompanied every new technology around the creation and dissemination of the written word. Pens, typewriters, computers, the internet and search engines and, most recently, large language models (LLMs) like ChatGPT — each technology was seen by its critics as somehow diluting the purity of the relationship between thought and word. This anxiety peaked with the sudden and widespread rise of LLMs and their ubiquity in knowledge production, especially by students and researchers. Unlike earlier technologies, which were tools that assisted either the physical act of writing or, as with search engines, made research and referencing easier, AI models can “think” for the user. According to a study conducted at the Massachusetts Institute of Technology (MIT), published earlier this month, the use of ChatGPT for writing incurs a considerable “cognitive debt”.

Nataliya Kosmyna and other researchers divided test subjects — who had to write essays — into three groups: Those who used only their brains to write, those assisted by search engines, and those who used ChatGPT. Participants also switched roles to ensure more robust results. The neural activity of all three groups was monitored over four months. The group using LLMs showed considerably lower cognitive engagement with their writing, had less ownership over their work and remembered less than their counterparts. For many, these findings conform to the broader panic around AI. The fear that AI will replace intellectual labour like automation did in manufacturing is exacerbated by evangelists like OpenAI CEO Sam Altman. In a recent essay, Altman wrote, “ChatGPT is already more powerful than any human that has ever lived.”

Both the MIT study and Altman might be overestimating the consequences of AI. While the cognitive effects of relying completely on an LLM might be adverse, there are ways to use it effectively. The act of writing — good writing, at least — is not about regurgitation of facts but rather about ways to collate, analyse and express. This training is important for intellectual development, but that does not mean it cannot incorporate new tools. The stage when AI is integrated into learning is also important. School students, for example, are still taught how to do long division even though they will likely use a calculator in adulthood. LLMs can be useful for “language” tasks — correcting grammar, summarising texts, helping with tone and tenor — without replacing or diminishing the author. The issue is not whether to use AI but how to. The rapid growth of AI means that research into its effects is still playing catch-up. The lessons from the social media boom, and the issues that appeared in its wake, highlight the importance of narrowing this gap. 25/6/25

Rethinking Language in Indian Education

As global examples from Germany to Japan reaffirm the value of native-language education, it is time India embraced its own plurality — not as a barrier, but as the very foundation of holistic learning and national identity

The linguistic and cultural diversity of any country must be celebrated with great attention and in its true spirit. India's multilingual phenomenon has always been an integral part of society, but the nature of plurality of languages differs greatly. India, as one of the richest linguistic nations in the world, represents the plurality and diversity in its society, which has been seen as its biggest strength.

The dominance of English as a global language of education has derecognised the linguistic, cultural and epistemic identities of multilingual people. During the colonial days, English was taught for vested interests. It was believed to have the quality of broadening the horizons of knowledge, and because of the variety of texts, it was thought to promote critical thinking and analytical skills, which was ably supported by the learning of rhetoric.

Even after independence, we fail to appreciate the mother tongue as a cognitive and pedagogical resource and find absolutism in the dogma of monolingualism as a language-teaching resource. English has been, for most people, a skill to master, not just a language to learn to express. English is, for the most part, a foreign language, but treated as a second language in India.

The immense damage done by communicative English language courses — by shifting the onus of communication to the receiver of the communication rather than the creator — has led to a peculiar situation of incomplete cognitive processing, or at best, partial understanding. If we look at the globe, we can see that some leading countries like Germany, China, and Japan, with the highest technological expertise, are offering primary education in their mother tongue.

The push for teaching in a universal language such as English has been shown to hinder children's educational progress in such countries. The key to human resources development is education, and the English-only policy fails to appreciate the mother tongue as a cognitive and pedagogical resource.

As a hapless victim of linguistic robbery, the schoolchild is terminally disabled from utilising the immense linguistic arsenal offered by his mother tongue. This reveals the fact that primary education in the mother tongue is as effective and functioning as it could be in any other dominant language. The use of home language, local language, and mother tongue-based primary and secondary education also entails that each language can provide cog-



nitive and educational resources to its learners. The historic and transformative National Education Policy (NEP 2020), in its section dedicated to language education called "Multilingualism and the Power of Language", endeavours to foster and accept linguistic diversity within the realm of education.

The policy recognises the significance of language as a potent instrument for fostering effective communication, advancing students' cognitive abilities, and cultivating cultural awareness. It further states that, wherever possible, the medium of instruction should be the mother tongue or the local or regional language. Thereafter, the home or local language shall continue to be taught as a language wherever possible.

It further emphasises that all efforts should be made to ensure that any gaps that exist between the language spoken by the child and the medium of teaching are bridged. NEP 2020 also provides fluidity to the three-language formula, as there is no specific language that shall be imposed on any State. The States, regions, and the students as well, are free to choose the three languages which the students want to learn, whereas at least two

of them are to be native to India — one of which is most likely to be the home, local, or regional language. The objective of the NEP 2020 is to make India a knowledge superpower by equipping its students with the necessary skills and knowledge, and to eliminate the shortage of manpower in academia, science, technology, and industry. In recent years, education in mother tongue, regional, local, or home languages has attracted serious attention worldwide. Mother tongue plays a critical role in the cognitive and intellectual development of a learner. Studies have shown that individuals fluent in their mother tongue tend to have higher educational success rates than those who are not.

Languages are instrumental in preserving cultural values and traditions, and having a strong foundation in one's mother tongue can aid in learning new languages. Unfortunately, many countries — particularly those that were colonised — continue to use the language of their colonisers as the medium of instruction in higher education. This is often done under the pretext of the unavailability of books and journals in local languages.

However, this practice puts students who come from schools that use local languages at a disadvantage, particularly in specialised fields such as medicine, science, literature, technology, and law. It is essential to recognise the importance of the mother tongue and to encourage its continued use in education and wider society to develop

the foundational skills of a society — such as literacy and critical thinking. The initial investment in multilingual programmes seems to be high because of the additional cost of developing new learning material, especially for languages that have not been standardised or do not have a script. It would also require teachers trained to teach in a multilingual classroom.

This requires renewed resource allocation and a clear policy to enrich the local languages to achieve the ultimate end of an effective mother tongue-based education system. It has now become essential to promote home, local, and regional languages to ensure the continuation and transmission of culture, customs, and history. UNESCO, too, is taking urgent action to encourage broad and international commitment to promoting multilingualism and linguistic diversity, including the safeguarding of endangered languages.

Mother-tongue education needs to be prioritised in policy development to ensure more responsive and nuanced approaches that take into account the unique linguistic and cultural needs of learners. Unfortunately, as everyone is a language user, they think they can comment on language — as it is everybody's business and nobody's business.

(The writer is an eminent linguist and author, currently serving as the President of the Linguistic Society of India. He is a former faculty member at the University of California, Berkeley. Views are personal)



M J
WARSI

POOR JOB

According to the Periodic Labour Force Survey data, India's unemployment rate rose from 5.1% in April to 5.6% in May this year. The spike, according to the PLFS figures, was particularly relevant to India's youth. This is, of course, not the first time that youth unemployment in the country has been red flagged by relevant data. Two years ago, a paper by the Center for Monitoring the Indian Economy had pegged the youth unemployment rate at a shocking level of 45.4%. Last May, the statistics ministry had stated that underemployment — where employment is not commensurate with skills, another problem that impacts Indian youth — was “surprisingly high” at 62.28%. That India has been facing a festering unemployment crisis in the last decade is not a secret. Cold statistics have borne out this worrying phenomenon repeatedly. As has public response: the attendance at the Mega Job Fair that was organised recently by the Indian Youth Congress bears proof that the government's claims and data notwithstanding, unemployment continues to be the proverbial elephant in the room.

Criticism of the Narendra Modi government by India's political Opposition for its failure to create employment for India's youth and, thereby, mine the demographic dividend is not rare. But it cannot be said that the Opposition has been effective in mobilising public opinion on unemployment as a means to change electoral outcomes. In the last general election, the Opposition did focus on unemployment, among other economic challenges, and managed to restrict the electoral tally of the Bharatiya Janata Party below the majority mark. But it could not prevent Mr Modi from winning a third term. Unemployment and uneven economic growth — innumerable Indians remain dependent on free rations for subsistence in the world's fourth-largest economy — remain lucrative avenues for electoral mobilisation in India. The Opposition must find a way to convey the extent of the crisis and elicit a favourable response from the electorate on this issue. Could the Indian Youth Congress's *rozgar mela* serve as a proverbial template in this regard? Such a ploy could generate favourable optics. However, mass mobilisation on economic issues requires a well-crafted, imaginative and meaningful strategy that would not only resonate with the electorate but also ensure that such burning questions are sustained in the public discourse. The Opposition, it can be said without a doubt, is yet to find a way to get the job done in this respect.

tel/24/12

Degrees of dissent

JIVAN ROY TALUKDAR

In May 2025, the University of Liverpool announced plans to set up a new campus in Bengaluru. It is one of the 15 foreign universities that have expressed interest in opening campuses in India. This development follows the Universities Grants Commission's 2023 regulatory update, aligned with the New Education Policy (NEP) 2020. The NEP aims to elevate India's academic ecosystem by inviting top global institutions to set up base in India.

While this move could foster healthy competition and encourage existing Indian universities to improve their infrastructure and academic standards, it also raises important questions about the quality and autonomy of our own institutions.

Foreign universities opening campuses in India is indeed a welcome step, especially as it could help reduce enormous foreign remittances. However, one must ask whether these institutions will be allowed to maintain the kind of independence and academic freedom that is increasingly under threat in India's own universities. These announcements come at a time when crackdowns on academic freedom are becoming disturbingly common on homegrown campuses.

Ashoka University is a telling example. On its website, the university aspired to become a global leader in liberal education. But the cornerstone of any liberal education is academic freedom—something that has come under strain at Ashoka. The case of Prof Mahmudabad is only the latest; earlier resignations of Dr Sabyasachi Das and Prof Bhanu Pratap Mehta also reflect this erosion. As noted academic and leader Yogendra Yadav wrote in a national daily, when an institution seeks to teach well and encourage critical thinking, it naturally cultivates a spirit of inquiry—which often leads to dissent.

When these foreign universities open campuses in India, what level of freedom will they actually enjoy? Will the government develop the maturity to tolerate dissent that may arise from these campuses? If foreign universities are allowed more freedom because they are seen as valuable investments, what message does that send to India's own institutions?

India ranks a dismal 156th out of 179 countries in the V-Dem Institute's Academic Freedom Index, with neighbours Bangladesh and Pakistan scoring higher. Not only have private institutions like Ashoka come under pressure, but even premier public universities like Jawahar Lal Nehru University have faced the government's interference—

from denying permission to travel abroad to allowing violent attacks on campuses. Time and again, institutional autonomy and academic freedom in India are tested.

The challenges are not only external. Internal campus politics, too, can be disruptive. The violent clash at JNU between the Akhil Bharatiya Vidyarthi Parishad and the Students Federation of India is a case in point.

In the United Kingdom, political parties are not allowed to directly contest student union elections. Individuals may form alliances, but candidates largely run as independents. If India wishes to reform its universities, perhaps a transition toward such a system is worth considering. This does not mean political activities should be banned from campus. Rather, a shift towards fostering alliances and debates without confrontation may help maintain intellectual diversity and civility.

Currently, no Indian university figures in the top 100 of the QS World University Rankings. If we want our institutions to match the global standards of those opening campuses in India, academic freedom must be expanded and diversity of thought encouraged.

It is time for India to legally guarantee academic freedom. In the UK, academic freedom is protected under the 1988 Education Reform Act, which ensures that staff can question received wisdom and advance new—even controversial—ideas. In the United States, the Supreme Court has consistently affirmed academic freedom as a core element of free speech. The recent confrontation between President Donald Trump and Harvard University showed the kind of institutional autonomy and courage American universities enjoy—even in the face of political hostility.

Belgium, one of the highest-ranked countries on the Index of Academic Freedom, recognises academic freedom as part of both freedom of expression and freedom of education. UNESCO, too, has emphasised academic freedom in its 1997 recommendations on the status of higher education teaching personnel. If India wants to bring its institutions up to international standards, it must consider enacting at least a soft law to protect academic freedom and research.

Institutions like National Law School of India University, and IISc have the potential to rival top global institutions. But to realise that potential, our campuses must become spaces of free inquiry—open to dissent as much as to the defence of government policies.

(The writer is pursuing legal studies at the National Law School of India University, Bengaluru) **DN/26/19**

School education

The Performance Grading Index 2.0 released by the Union Education Ministry is a tell-tale sign of how the school education system continues to fail the State children. It punches holes in the policy and approach adopted by the government, which has been hindering students' academic and overall development. The State has been ranked in the second lowest grade along with nine other States, including five from the Northeast, in the grading index. Assam's score is in the range of 461-520, and is tenth from the bottom among the 36 States and UTs assessed. In fact, compared to the previous assessment, the State's rank dropped a few points in the domain 'Access' - an assessment of enrolment, retention of students, transition of students to the next grade, identification and mainstreaming of out-of-school children - and is now third from the bottom just above Arunachal and Meghalaya. In the teacher Education and Training Domain, Assam, with a score of 52.1, is just above the worst performing Meghalaya (46.8).

Despite decades of investment in expanding access to education, the outcomes of school education in the State remain deeply concerning. Dropout rates continue to be disturbing, particularly at the secondary level, where many students fall through the cracks due to poor learning outcomes, lack of motivation, and socio-economic pressures. The issue lies not just in access, but in quality as well. For years, the State government has focused heavily on building schools and upgrading infrastructure. While these are essential, they alone cannot ensure meaningful learning. True educational reform demands a shift in focus toward what happens inside the classroom - the quality of teaching, curriculum delivery, and student engagement. One of the most overlooked areas is teacher education and training. Teachers are the backbone of the education system, yet many are inadequately trained. Moreover, teachers are frequently burdened with non-teaching duties like election work, census surveys, and administrative tasks, reducing their classroom effectiveness. This systemic misuse of teaching manpower further weakens the core purpose of education. The widespread use of "freebies" - such as midday meals, bicycles, and uniforms - is often justified as a means to improve enrolment and retention. While these measures have succeeded in bringing children to school, they have not necessarily translated into better learning outcomes. Freebies can support education, but they cannot replace a strong academic foundation, qualified teachers, and effective teaching practices. When incentives become the main attraction, the core goal of learning risks being overshadowed. Efforts to assess the quality of education through initiatives like Gunotsav have also fallen short. These initiatives tend to focus more on metrics than on meaningful learning. To truly transform school education, the government must prioritise teacher capacity building, reduce non-teaching assignments, and create a culture of accountability and support in schools.

AT 12/5/16

Why India's youth needs mandatory health education

Every day, countless Indian school children reach for sugary snacks, unaware of the long-term health consequences hidden in their daily choices. The Central Board of Secondary Education (CBSE) recent initiative called Sugar Boards, introduced in May 2025, is a commendable first step toward raising awareness. These boards, now displayed in over 24,000 schools, highlight the harms of excessive sugar consumption and encourage healthier options like fruits and water. But awareness alone is not enough.

If we are serious about addressing the alarming rise in diabetes, obesity, and mental health issues among India's youth, we must go further. We need mandatory, curriculum-integrated health education in schools — delivered by trained teachers and supported by national policies that limit the influence of junk food. Only then can we equip our children to make informed, lasting choices for their well-being.

A Growing Crisis

The urgency is clear. A 2023 study by the Postgraduate Institute of Medical Education and Research (PGIMER) found that 15.35 per cent of Indian schoolchildren are pre-diabetic, and nearly one per cent has Type 2 diabetes, a condition once rare in children. According to the Indian Council of Medical Research (ICMR), 13 per cent of adolescents are obese and 18 per cent are overweight, putting them at risk for complications like non-alcoholic fatty liver disease and early-onset dental problems. Mental health trends are equally troubling. A 2022 NCERT survey revealed that 23 per cent of students experience anxiety or stress, often driven by academic pressure. These health challenges are compounded by sedentary lifestyles, excessive use of screen time and widespread access to ultra-processed foods.

In my work at Tarang Health Alliance, I've seen how these factors take a toll on young lives. Sugar Boards, supported by the National Commission for Protection of Child Rights (NCPCR) and the Food Safety and Standards Authority of India (FSSAI), provide valuable information. But information alone does not lead to behaviour change. For that, we need continuous and contextual health education.

Countries like Finland have mandated health education since the 1970s, covering nutrition and mental well-being, and have seen significantly lower obesity rates. Australia integrates health education throughout its K-12 system, while in India, Kerala's curriculum includes both physical and health education, contributing to improved youth health outcomes. These examples show what is possible. Since 2016, Tarang Health Alliance has reached over 15,000 students across Haryana, Delhi-NCR, Chandigarh, and Jaipur. We teach students health-related skills and motivate them to improve their health behaviour

through an interactive program. Our trained educators help children make better food choices, manage stress, and say no to tobacco. But such efforts should not remain limited or optional. Every child, regardless of background, deserves access to health education. The long-term benefits are clear: healthier communities, lower healthcare costs, and a generation better equipped to face life's challenges.

The Need for Policy Reform

Current policies fall short. While Sugar Boards are visible reminders, they do not address the flood of sugary snacks in school canteens or the aggressive marketing of junk food to children. The FSSAI's delay in developing India-specific regulations for high-fat, salt, and sugar (HPSS) foods leaves schools relying on WHO standards that do not fully align with Indian food habits. Cities like Chandigarh and Kolkata have banned junk food in schools, but a national policy is long overdue. India should also follow the lead of countries like the UK, which have placed strong restrictions on food advertising aimed at children.

Parents must be part of this transformation.

Awareness campaigns and school-based workshops can help them reinforce healthy habits at home — especially crucial in low-income families, where processed foods often seem like the only affordable option. A Simple Formula for Healthy Living. At Tarang, we are also promoting the "5-4-3-2-1-0: Countdown to a Healthy Life" campaign, a memorable "mantra" to help children take charge of their health:

- 5) five servings of vegetables or fruits
- 4) At least four hand washes every day with soap & water: after using the toilet and before each meal
- 3) Three portions of protein-rich food every day
- 2) No more than two hours of recreational screen time every day
- 1) One hour of physical activity every day
- 0) Zero consumption of tobacco, sugary drinks, or packaged salty snacks

Health education doesn't just benefit students — it empowers them to influence their families and communities. But to scale this impact, we need commitment at every level: from policymakers, educators, and parents alike.

The CBSE's Sugar Boards signal an important intent, but intent must translate into action. Let's move beyond displays on school walls and build a national framework that makes health education a core part of every child's learning journey. With trained teachers, informed parents, and robust policies, we can ensure India's children grow up healthier, stronger, and more resilient. The time to act is now.

(The writer is the founder of Tarang Health Alliance and India's national representative for the UNESCO Chair on Global Health & Education. Views are personal) २५/६/२५



RAHUL MEHRA

English a bridge, not a wall

NARAYANAN KIZHUMUNDAYUR

Language is among the most profound gifts that human civilisation has nurtured over millennia. It is through language that we think, remember, express, dream, and interact with the world around us. It is the invisible thread that ties together individuals into communities and civilisations. In the modern age, where humanity finds itself in an intricately interconnected world, where nations are no longer islands unto themselves but are part of a vast global system, one language has come to acquire special significance. That language is English.

Whether one likes it or not, English today occupies a preeminent place in the linguistic hierarchy of the world. It has become the key to participation in the global economy, the medium of international diplomacy, the voice of science and innovation, and the language of access to vast pools of knowledge across disciplines.

In recent times, the Union Home Minister, in a speech that evoked both cultural pride and linguistic introspection, commented on the over-dependence on the English language in Indian official, educational, and social domains. His observation was rooted in the idea that India's native languages - rich in heritage and expressive power - deserve greater prominence in our national discourse and identity. He argued that English, a language imposed during colonial rule, continues to dominate even in independent India, thereby alienating a large section of the population from administrative and intellectual processes.

This statement, while stirring a chorus of support from cultural nationalists, has also opened up deeper debates among linguists, educators, economists, and common citizens alike. The question is not whether Indian languages should be promoted - they must be - but whether this promotion should come at the cost of dismantling the role of English in our lives. The answer, when viewed

through the lens of modern realities, is not a simple either-or, but calls for a nuanced and inclusive approach.

English, in the context of modern life, is not merely a colonial residue or a fashionable tool of the elite. It is, for many, a practical necessity. In urban and even semi-urban India, English is the preferred medium of instruction in schools. It is the language in which national and international examinations are conducted, the language in which scientific research is published, and the medium through which the young generation connects to global narratives.

For a vast majority of Indians who aspire to study in reputed foreign universities, to work in multinational corporations, or to engage with international communities, English is not a choice - it is a bridge. It is a bridge that connects the dreams of a village student with the lecture halls of Harvard or Oxford, a bridge that allows an Indian start-up to pitch its product to a European investor, a bridge that lets a scientist in Pune converse with a fellow researcher in Tokyo. In this sense, English has transcended its historical baggage and transformed into an enabler of opportunity.

Moreover, English performs a unique and almost irreplaceable function in a country as linguistically diverse as India. With over twenty-two officially recognized languages and hundreds of dialects spoken across its vast geography, India is a mosaic of tongues. In such a setting, English has emerged as a neutral, non-regional language that does not belong to any one group. It helps avoid linguistic favouritism and acts as a link language for inter-state communication. It is the language in which legal documents are drafted and read, the language in which parliamentary debates are often conducted, and the medium through which government departments coordinate with each other across state boundaries.

Removing English from these spheres without a robust and uniform replacement mechanism could lead to confusion, inefficiency, and even

linguistic imbalance in a multilingual democracy like ours.

In the realm of education and knowledge, the significance of English is even more striking. The world of academia has, for better or worse, become increasingly Anglo-centric. Most scientific journals, technical databases, research portals, and international academic forums operate in English. The terminology of medicine, engineering, law, and economics is predominantly English-based.

While efforts are being made to translate knowledge into Indian languages, the scale of this task is massive and the pace slow. Until such infrastructure is adequately developed, English will continue to be the main window through which Indian students and researchers look out at the world of contemporary knowledge. To deny young Indians the access to this window in the name of linguistic pride is to risk confining them to intellectual isolation. The ideal response would be to simultaneously strengthen Indian languages in academia while preserving English as a conduit of global learning.

At the same time, the Home Minister's concerns cannot and should not be dismissed outright. It is true that many Indians, especially in rural and marginalized communities, face exclusion because of their lack of access to English education. There exists an elite bubble - especially in urban India - where English has become a status symbol rather than just a language. Fluency in English is often mistaken for intelligence, and lack of it for inferiority. This perception is unjust and socially damaging.

We must indeed work towards an education system where Indian languages are given due respect, and students can access high-quality learning in their mother tongues. This would require extensive translation of textbooks, teacher training in regional languages, promotion of native literature, and robust policy support. But even as we move in that direction, we must not make English a scapegoat for our own failures in uplifting native



tongues. English did not marginalize our languages; our neglect did. Blaming English for our insecurities would be like blaming the mirror for not showing a flattering reflection.

Furthermore, English has now become embedded in the very fabric of Indian urban culture. From cinema to advertising, from social media to literature, English is not just used - it is often reinvented. Indian authors like Salman Rushdie, Arundhati Roy, and Jhumpa Lahiri have carved out a unique identity in global literature using English infused with Indian sensibilities. Code-switching between English and native languages is common in daily speech, creating a vibrant hybrid called "Indian English," which is now a recognized linguistic variant. It reflects how English is no longer a foreign tongue but one of the many voices in which India expresses itself. To pretend otherwise is to deny the dynamic evolution of our cultural expression.

In conclusion, while the Home Minister's statement serves as a valuable reminder of the need to preserve and promote India's linguistic heritage, it also underscores the importance

of making language policies that are practical, inclusive, and forward-looking. English is not the enemy of Indian languages - it is their companion in the modern world. Rather than being viewed as a rival to Hindi, Tamil, Malayalam, Bengali, or Marathi, it should be seen as one more thread in the rich tapestry of Indian communication.

The goal should not be to reduce English usage but to raise the standard, availability, and dignity of native language education. The real question is not whether English should have a place in India - it already does - but whether all Indians should have equal access to its benefits, while still retaining rootedness in their mother tongues. In the end, language should not become a battlefield of identity politics. It should remain what it was always meant to be: a bridge between people, not a wall. And in today's complex and connected world, English continues to be one of the strongest and most reliable of these bridges. It is our task now to use it wisely, not burn it with haste.

Educated lawmakers

There is a pressing need to prescribe minimum educational qualifications for law makers, says Srijita Majumder

India, the world's biggest democracy, remains alive in the framework of universal adult franchise as mandated under the Constitution. Therefore, elected representatives owe a huge responsibility towards the public at large. So, some genuine concern may arise regarding the qualifications of public representatives.

Article 84 of the Constitution clearly states that "A person shall not be qualified to be chosen to fill a seat in Parliament unless he (a) is a citizen of India, (b) is, in the case of a seat in the Council of States, not less than thirty years of age and, in the case of a seat in the House of the People, not less than twenty-five years of age, and (c) possesses such other qualifications as may be prescribed in that behalf by or under any law made by Parliament." The same is laid down under Article 173 in respect of the State Legislatures.

The provision is, at least, quite self-explanatory in terms of the qualifications of the Members of Parliament (MP) and the Members of Legislative Assembly (MLA), completely silent on the educational aspect and thereby sets the context of this article. This comes at the cost of effective governance, public satisfaction level and the overall integrity rate of the country. The Constitution makers had shown their foresight by enacting government educational qualification classes for other wings of the Government i.e. the Judiciary and the Executive. Therefore, the same criterion for lawmakers can well be established.

Former Election Commissioner, the late G.V.G. Krishnamurthy, had voiced this concern in an address in Chennai in 1988. However, the same was countered for its implementation complexities. Since then, much time has passed and the implementation of a minimum educational qualification has been kept in abeyance.

It is a pity that the lawmakers from implementing the minimum

qualification policy! A few socio-political factors coupled with the voting behavior will help us understand. First of all, the voting behavior is taken into account wherein the voter's psychology gets tilted to some prevalent factors. Voters often get influenced by catchy slogans, charisma of the leader, pinch of religious sentiments, etc. No doubt this aids the parties to draw more votes. Each party has its own vote bank which determines the fate of the election and the leaders leave no stone unturned to woo these votes. Hence many argue that having a threshold of educational qualification will not guarantee a stronger bond with the vote bank, who mostly hail from the lower strata of the society.

Secondly, low mass literacy is something that disconnects a major chunk of the population from the educational elite. Indian politics mostly has to do with vote-bank politics, no matter how much the same is beneficial for the entire population. It can be assumed that the vote-bank politics will allow more votes for their favorite ones. This creates a vicious cycle wherein the said population gets handicapped by the lower educational qualifications and ends up bringing the wrong person to power. Such politics may not require the touch of educational literacy. But these hollow promises, untended commitments and absurd claims by politicians about educational qualifications pursued from some non-existing university or in some non-existing discipline, pose a serious threat to the democratic framework of the country.

Considering the mass appeal of MPs and MLAs, it is pertinent to ensure some degree of civility in their speeches, particularly in recent political framework. Some formal educational qualification for leaders will keep their contributions

meaningful yet appealing to the mass. An educated representative will be able to inculcate the value of education among the people and will ensure more educational opportunities to uplift oneself. Besides, this is essential for understanding the legislative aptitude. Since the elected candidates represent their constituency in the parliament of the state legislature, as the case may be, they take part in the law-making procedure. Such legislation is followed by the executive and interpreted by the judiciary as and when a dispute arises. This also overburdens the judiciary as it has to rectify poorly drafted legislations. So, the entire structure is based on the legislative product coming out of the efforts of less-qualified MPs or MLAs.

The statistical data represented by PBS Legislative Research stresses upon the educational profile of the high Lok Sabha. Despite a steady decline in the number of MPs having undergraduate level education, the number of MPs with postgraduate education has increased. As per data, 79 percent of newly elected lawmakers have completed undergraduate education.

The picture is different in the context of the 17th West Bengal State Legislative Assembly. In 2018 the number of MLAs having higher

Secondary education was 32 per cent which rose to 38 per cent in 2021. Decline is noticed in the number of graduate degree holders from 2015 to 2021 (43 to 38 per cent). For post graduate and above also, the trend has been downwards. Along with the concern about low education comes the credibility issue with some degrees. The useless and unimpressive statements by some leaders raise suspicion as to their educational qualification. So more prescribing of minimum educational qualification will not do much as it might be a cakewalk for some to obtain these in an unconventional manner.

Keeping this in mind, it is advisable to hold their educational background under some scrutiny. This can be ensured by proposing a screening process before letting candidates contest an election. A panel must be formed which will not only check the credibility of their educational background but may also assess their legislative competence. To prevent any bias, the panel should comprise of the retired professionals. First, anonymity shall be maintained in terms of party affiliation of the candidates, their names etc., throughout the screening and assessment. This will ensure that most competent candidates who will contest the

election. Such shortlisting will be done for each party and it should be based on the number of constituencies. This procedure, although not fool-proof, at least ensures some transparency in terms of the educational qualifications possessed by the candidates and their legislative competence.

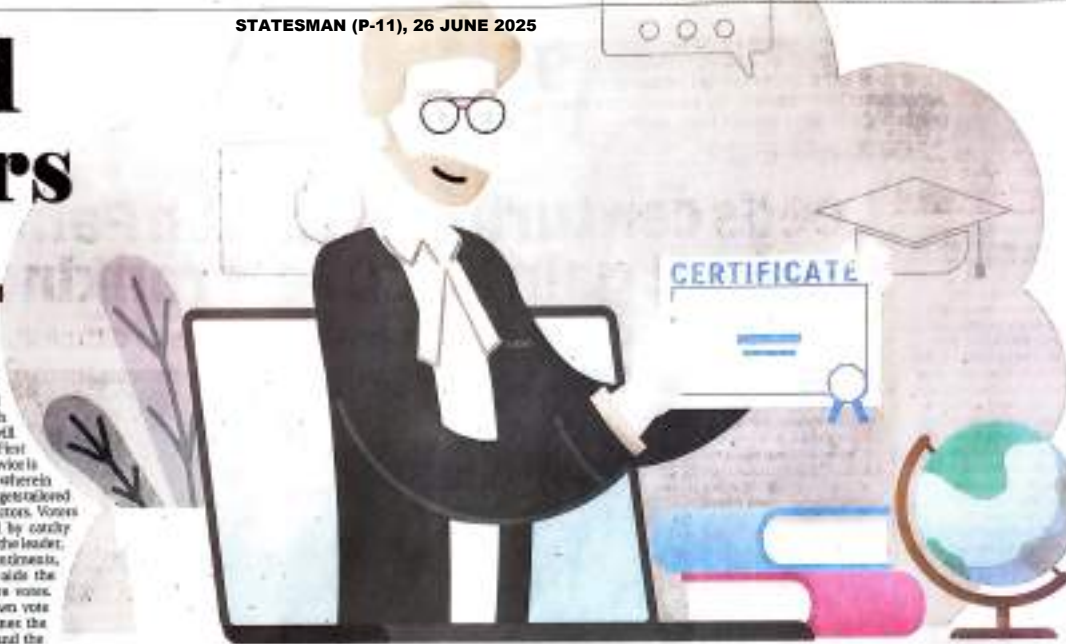
Some may argue against such minimum legislative work requires more of public persuasion than some political knowledge. In a way this is true but lawmaking is a democratic country without even basic educational qualifications brings other government departments. The uneducated individuals without any legislative competence will not be able to understand the legal nuances involved in a statute. Also this creates a flawed perception of politics among the public by engaging in abuse of power, meaningless conversation, promotion of reputation over scientific temper, and ultimately doing no good for the needy ones.

With all this in the inquiry, there have been past instances of tagging the reserved yet educated politicians as the "Mam" ones and thus doing away with the prominence of educated politicians. Amidst all these some silver linings can be observed as states like Rajasthan and Haryana

have mandated the inclusion of minimum educational qualifications to contest the panchayat elections. The same has been crystallised through statutes such as The Rajasthan Panchayat Raj Act 1994 and The Haryana Panchayat Raj Act 1994.

Such inclusion of educational qualification in the Panchayat elections does not hinder the political work; rather it facilitates the implementation of educational measures at the grassroots level. So, the arguments supporting the disconnect between education and elections are not tenable. Further it creates an irony where one contesting Panchayat Elections in those states must have a prescribed educational background while the ones making the law may be devoid of any education.

Apart from this, it sets a worrying trend as the politicians rampantly contrived abuse using the illiterate possible language. With education comes competence and political insightfulness. Hence, keeping in mind the famous saying "A fish rot from its head", it has become even more imperative to educate the government's present cohorts, who are involved in policy making.



उच्च शिक्षा में कुछ अच्छा होता हुआ

ईरान-इजरायल युद्ध के बीच शिक्षा क्षेत्र में भारत की एक उपलब्धि दबकर सी रह गई। क्यूएस (क्वाकवोरेली साइमंड्स) वर्ल्ड यूनिवर्सिटी रैंकिंग-2026 में भारत ने अब तक का सर्वश्रेष्ठ प्रदर्शन किया है। इस वर्ष इसमें 106 देशों के कुल 1,501 शिक्षा संस्थानों को स्थान मिला, जिनमें 112 संस्थान पहली बार सम्मिलित हुए हैं। भारत के 54 संस्थानों को इस प्रतिष्ठित सूची में स्थान मिला, जो अब तक का रिकार्ड है। यह संख्या भारत को न केवल जर्मनी (48) और जापान (47) जैसे देशों से आगे ले जाती है, बल्कि इसे अमेरिका, ब्रिटेन और चीन के बाद चौथा सर्वाधिक प्रतिनिधित्व वाला देश भी बना देती है। उल्लेखनीय है कि वर्ष 2014 में भारत के केवल 11 संस्थान इस सूची में थे। यानी पिछले एक दशक में भारत ने लगभग पांच गुना वृद्धि दर्ज की है। इस वृद्धि में न केवल आईआईटी, भारतीय विज्ञान संस्थान, बैंगलुरु, दिल्ली विश्वविद्यालय, अन्ना विश्वविद्यालय, जेएनयू जैसे पारंपरिक एवं सरकारी संस्थानों-विश्वविद्यालयों ने योगदान दिया है, बल्कि कई निजी विश्वविद्यालयों ने भी अपनी उपस्थिति दर्ज कराई है। आठ भारतीय शिक्षा संस्थान पहली बार इस सूची में शामिल हुए हैं। यह भारतीय उच्च शिक्षा की गुणवत्ता और वैश्विक प्रतिस्पर्धा में बढ़ती भागीदारी का एक संकेत भी है। इस उपलब्धि पर प्रधानमंत्री नरेन्द्र मोदी का यह वक्तव्य प्रासंगिक प्रतीत होता है, 'क्यूएस वर्ल्ड यूनिवर्सिटी रैंकिंग हमारी शिक्षा व्यवस्था के लिए शानदार खबर लेकर आई है। हमारी सरकार भारत के युवाओं के लाभ के लिए शोध और नवाचार के इकोसिस्टम को मजबूत करने के लिए प्रतिबद्ध है।'

क्यूएस वर्ल्ड यूनिवर्सिटी रैंकिंग उच्च शिक्षा की दुनिया की सबसे प्रतिष्ठित और व्यापक रूप से संदर्भित रैंकिंग्स में से एक मानी जाती है। इसके अंतर्गत शिक्षा संस्थानों का मूल्यांकन नौ संकेतकों के आधार पर किया जाता है, जिनमें शैक्षणिक प्रतिष्ठा, नियोक्ता प्रतिष्ठा, फैकल्टी-छात्र अनुपात, छात्र अनुपात, रोजगार परिणाम, अंतरराष्ट्रीय शोध नेटवर्क जैसे मानक शामिल हैं।



प्रणय कुमार



नवाचार को प्रोत्साहन से मिलते अच्छे परिणाम ० छज़ल

उच्च शिक्षा में हुए हालिया सुधारों के पीछे कई महत्वपूर्ण कदम रहे हैं। राष्ट्रीय शिक्षा नीति-2020 की संस्तुतियों का व्यवस्थित क्रियान्वयन, शोध, अनुसंधान और नवाचार को निरंतर प्रोत्साहन तथा वैश्विक साझेदारियों और प्रतिस्पर्धा को बढ़ावा देने की दिशा में गंभीर पहल की गई है। साथ ही हर स्तर पर तकनीकी दक्षता और व्यावसायिक कौशल को बढ़ावा दिया गया है। शिक्षा और उद्योग जगत के बीच की खाई पाटने, प्रवेश, फैकल्टी और विषय चयन की प्रक्रिया को अधिक लचीला बनाने, विश्वविद्यालय परिसरों में विविधता और समावेशन की भावना को प्रोत्साहित करने और रोजगारोन्मुखी शिक्षा को सुदृढ़ करने जैसे कई निर्णायक कदम उठाए गए हैं।

शिक्षा के मोर्चे पर हो रहे व्यापक प्रयासों का ही परिणाम है कि आज भारत के आठ संस्थान प्रति फैकल्टी उद्घरण श्रेणी में विश्व के शीर्ष 100 संस्थानों में शामिल हो चुके हैं। इस मानदंड पर भारत ने अमेरिका और ब्रिटेन जैसे देशों को भी

क्यूएस जैसी रैंकिंग्स को हमें लक्ष्य नहीं, दर्पण की तरह देखना चाहिए और अन्य शिक्षा संस्थानों पर भी ध्यान देना चाहिए

पीछे छोड़ दिया है। इसी प्रकार नियोक्ता प्रतिष्ठा के मापदंड पर हमारे पांच विश्वविद्यालय वैश्विक शीर्ष 100 में स्थान पाने में सफल हुए हैं, जो उद्योग जगत में भारतीय स्नातकों के प्रति बढ़ते भरोसे का संकेत है।

शैक्षणिक प्रतिष्ठा के क्षेत्र में भी आईआईटी, दिल्ली, बंबई और मद्रास जैसे संस्थानों ने अपनी फैकल्टी और वैश्विक शैक्षणिक साझेदारियों के चलते उच्च रेटिंग अर्जित की है। हालांकि इसी वर्ष जोड़े गए अंतरराष्ट्रीय छात्र विविधता जैसे संकेतकों में भारतीय विश्वविद्यालयों-संस्थानों को अपेक्षित रैंक नहीं मिली, जिसका समग्र रैंकिंग पर भी कुछ प्रतिकूल प्रभाव पड़ा है। स्पष्ट है कि उच्च शिक्षा पर और अधिक ध्यान देना होगा और इसकी कोशिश करनी होगी कि अन्य शिक्षा संस्थानों और विशेष रूप से राज्य विश्वविद्यालयों में शिक्षा की गुणवत्ता सुधरे।

क्यूएस या अन्य किसी भी वैश्विक रेटिंग एजेंसी को भी यह समझना होगा कि देश विशेष की परिस्थितियां भिन्न-भिन्न होती हैं। भारत जैसे देश की तुलना पश्चिमी देशों से नहीं हो सकती। भारत में इतनी विविधता है कि हमारे विश्वविद्यालय एवं अन्य शिक्षा संस्थान विविधता के उत्सव-स्थल हैं। निःसंदेह यह उपलब्धि प्रेरणास्पद है, परंतु हमें यह भी स्वीकारना होगा कि यह सफलता अभी मुख्यतः आईआईटी, कतिपय केंद्रीय विश्वविद्यालयों और चुनिंदा संस्थानों तक ही सीमित है। देश के अधिकांश विश्वविद्यालय अभी भी सीमित फंडिंग, कमतर शोध उत्पादन, सुयोग्य अध्यापकों की कमी, अधुनातन प्रयोगशालाओं की अनुपलब्धता, नवाचार के प्रति उदासीनता, अल्प अंतरराष्ट्रीय सहयोग एवं साझेदारी जैसी चुनौतियों से जूझ रहे हैं। वस्तुतः क्यूएस या किसी भी रैंकिंग्स को हमें लक्ष्य नहीं, दर्पण की तरह देखना चाहिए, जो हमें आत्मनिरीक्षण का भी संदेश देता है। वास्तविक उत्कृष्टता तो रैंकिंग्स से परे जाकर भारत के स्व को विस्मृत किए बिना शिक्षा का वैश्विक प्रतिमान गढ़ने एवं माडल खड़ा करने में है।

(लेखक शिक्षाविद् है)

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NEP and entrepreneurship

Dr SRIPARNA B BARUAH

Fostering entrepreneurship through education can equip India's youth to drive innovation, self-reliance, and inclusive economic growth.

Entrepreneurs play a crucial role in India's growth story, driving economic development, job creation, and innovation. As India moves towards becoming a \$5 trillion economy, entrepreneurship is at the heart of this transformation. Entrepreneurs are not just wealth creators but also nation-builders. With more individuals taking the leap into business, India's journey towards economic resilience, innovation and self-reliance is becoming stronger than ever before.

As India aspires to become a superpower backed by robust economic growth, we have to embed a culture of innovation and entrepreneurship in our education system, beginning at the school level. An innovation- and entrepreneurship-focused education will play a central role in developing crucial life skills and preparing students for life beyond classroom. In many ways, the National Education Policy (NEP) 2020 appears to be an endeavour to encourage and instill a spirit of innovation and, to some extent, entrepreneurship. Focusing on enabling children not only to learn, but more importantly to understand how to learn, the policy promotes an education system geared towards learning how to think critically and solve problems, how to be creative and multidisciplinary and how to innovate, adapt and absorb new material in emerging and changing fields. It aims to facilitate a pedagogy that makes education experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, and discussion-based – thus fostering a sense of problem-solving and an attitude of innovation in children instead of

trapping them in a herd mentality.

The NEP appears to be an enabler of innovation. The unemployment rate among educated individuals in India is 11.4%. Considering that half of India's population is under 35, this seemingly small percentage represents a very large number. The UN even suggests that by 2027, India will represent almost one-fifth of the global workforce, which will, by far, be the world's largest. The NEP plays a significant role in creating employment opportunities. It aspires to build an entrepreneurial culture in the country by enabling students to engage in project-based learning, experiential learning, service learning, and vocational training. This helps develop a mindset that celebrates entrepreneurship – the most important aspect of starting a business. Entrepreneurship requires several ingredients, and they must be inculcated in students by integrating them into day-to-day learning and across all subjects.

Not every student will launch an innovative, scalable, or tech-based business, but most could benefit from adopting a more entrepreneurial mindset. Success in the information economy depends not just on what you know but on what you can find out. The ability to persevere through problems, work independently, and seek out creative solutions will be valuable across all careers.

This raises the question of whether entrepreneurship can be taught. Some argue that entrepreneurship is innate – a matter of genetics. Others favour learning by doing. Research shows that entrepreneurship education can enhance employability, lead to new business creation, and increase the

likelihood of success. Studies involving children as young as 11 years show that entrepreneurship can shift mindsets and impact personality traits that are essential for entrepreneurial thinking.

Our education system and broader environment often dictate what we should do, instead of encouraging us to think independently; there is always someone telling us what to do. In India, failure is traditionally seen as a major setback. This mindset is perhaps the biggest challenge, because entrepreneurship is also about failure – about learning from failure. NEP 2020 lays special emphasis on developing the creative potential of each individual. The education system should adopt various measures to promote a learning environment where creativity, ideation, innovation, problem-solving, and entrepreneurial skills are nurtured, regardless of students' age. If India is to become a superpower backed by robust economic growth, we must instill a culture of innovation and entrepreneurship in our education system, starting from the school level. The curriculum needs to be designed in such a way that it helps students develop life skills and prepares them for life beyond classroom.

Bright students should be encouraged to take up entrepreneurship and understand how it should be pursued while they are still on campus. Students can bring fresh ideas, innovative thinking, and determination to solve issues and create large-scale impact. This can begin at the school level. It is important to create student entrepreneur hubs/incubation centres for innovation or similar facilities on campus designed to support student-led entrepreneurial activ-

ity. It is also essential that the areas of academic expertise of a college are reflected in its entrepreneurship programmes. For example, if technology and finance are strong subject areas at a college, then a student entrepreneurship hub that supports FINTECH ideas becomes a natural fit. Colleges need to promote student entrepreneurship to build campus-wide awareness. This can be achieved through regular informal student meetups that enable students to connect with one another and form business teams. Internal startup hackathons can also be held. Another critical aspect is the provision of proper mentorship. Mentors can help students understand the challenges involved and motivate them to launch their initial ventures.

From the school level itself, infrastructure such as innovation labs, rapid prototyping labs, 3D printing labs, makerspaces, tinkering labs, pre-incubation centres, digital libraries, etc., should be made available within institutions. This will help nurture creative skills among students. There is also a need to allocate an 'innovation fund' whenever possible. Since teachers are the key drivers of innovation, it is important to identify those with prior exposure or a strong interest in leading innovation- and entrepreneurship-related agendas.

The NEP can play a pivotal role in fostering entrepreneurship in India by reshaping the educational landscape. By integrating vocational education, promoting critical thinking, and encouraging experiential learning from an early age, it can empower students to become job creators rather than job seekers.

Future of the US student visa

BASAB DASGUPTA

There have been multiple reports in recent months about abrupt cancellations of student visas and SEVPs (Student and Exchange Visitor Program) of international students in US universities without any prior notification or warning. This situation evolved from the feud between President Donald Trump and elite universities like Harvard and Columbia regarding alleged tolerance of those schools of violent anti-semitic protests and various purportedly anti-US activities.

These events drew my attention because of my own migration to the US for higher education on a student visa and my concern for thousands of fellow Indian students on a similar path. Many questions immediately popped up in my head: a) Why do American universities even admit so many international students? b) Why do foreign students come to the US? c) Does anyone vet these applicants about their background? d) Should the US pull the plug on students who have risked their entire future and financial resources to realize the dream of an American education?

There are, at least, three answers to the first question: i) nation's financial situation; ii) building of cultural diversity in the student body and iii) drop in domestic enrolment. Students have many different reasons for US education: better education, more opportunities with a US education, exposure to a foreign culture, possible US citizenship, worldwide travel and so on.

To answer the other questions, a review of my migration to the US is in order. I really did not have a burning desire to get a PhD degree in the US, and my parents certainly did not have the financial means to support that ambition even if I did. My decision was made by peer pressure more than anything else; many of my friends from Presidency College were applying for graduate study in the US and my competitive spirit kicked in.

What made my decision easy was the fact that I could get a "teaching assistantship". It was different from a scholarship or a fellowship because it required me to do some work in

exchange for that form of help—typically teaching undergraduate physics labs. The assistantship not only provided enough money for financial survival, but all the tuition was paid for. In other words, I did not make any financial contribution to the revenue of US universities.

This is true for most graduate-level assistantships. Undergraduate education is a different story. There are no teaching or research assistantships available for undergraduates. The very few scholarships are reserved for exceptionally brilliant students. As a result, only students from extremely wealthy families can afford to come to the US for undergraduate studies and pay the tuition and living expenses. They are not even allowed to work under a student visa.

My application for admission to any graduate school started with a simple informal letter to the chairman of the physics department. In response, I received a large envelope containing a standard acknowledgment letter, application forms, description of the application procedure, a university catalogue and some other informational material. Two key requirements for the application process were a fee and recommendation letters from professors familiar with my academic work.

In retrospect, I recognize that there was no official questionnaire or requirement about my personal background, especially political and/or ideological viewpoints and my even hostilities. I was not vetted. To tell you the truth, I didn't even have a strong political view. Capitalism seemed better than communism for both my professional and personal future—a conviction resulting from Naxal movements which severely and adversely affected our college education in Kolkata.

As a result, I had no inkling to join any student protest or demonstrations in the US even though the Vietnam war was still raging. Coming from a turbulent political environment in Kolkata, I was surprised to see a lack of political activity or even discussion among students. When I asked one of my American friends, he chuckled and said, "You are too new to this country to understand that politics in this country is decided by big



corporations and mega donors". I didn't even see Indian students publicly supporting India's war against Pakistan for the liberation of Bangladesh.

My successful completion of a PhD degree in the US opened the door to a green card, eventual citizenship and a good professional career. I have lived a productive and prosperous life, and I am thankful to the US education system for that. It would have been a devastating experience if my student visa was revoked before my completion of PhD regardless of the reason.

However, as a US citizen, I fully agree with the thinking that there is no place for foreign students in this country who hate America or have some destructive political agenda such as antisemitism. Such students should not be given student visas or be deported if they are already here. Same is true for students whose primary purpose is espionage, stealing proprietary information or other activities harmful to the US.

I do not know how US policies regarding student visas and SEVP will change in future. Based on my personal experience, my conviction is that granting student visas or revoking existing ones should not be a blanket decision affecting all international

students in the same way but based on a systematic, logical approach. Most importantly, one must make a distinction between graduate and undergraduate students. Graduate foreign students are emotionally more mature and do not see the point of participating in any activist type of role. They are more concerned about establishing their career, starting a family and possibly getting a green card; they are all dreaming about a bright future.

The undergraduate student population are more passionate about ideological causes, more easily excitable and not too concerned about consequences. I believe that it would be unfair to the international graduate students to impose the same visa restrictions as undergraduates.

Even for undergraduate students, we must be selective before imposing visa restrictions. Education in the US is very expensive. If we look around the globe it is likely that wealthy students come from old-rich Middle Eastern countries and China. The Muslim students from radical Islamic countries are likely to have an inherent anti-Israeli and by extension an anti-American sentiment. The Chinese students are less likely to take sides in Arab-Israeli conflicts.

On the other hand, if we are concerned about espionage or theft of intellectual properties, Chinese students, especially the graduate students, must be vetted thoroughly. They are likely to have the capability to do advanced research on items like chemicals, biological elements and formulation of new dangerous materials. Recent arrests of multiple Chinese students in the University of Michigan for trying to smuggle undeclared biological material is a case in point. Graduate students would also have better capability to understand new promising technical ideas and copy them.

In summary, if the goal is to eliminate applicants who are hostile to the US and its policies, the priority should be careful screening of Islamic Middle Eastern undergraduate students. On the other hand, the US should focus on Chinese graduate students to protect intellectual properties or prevent development of dangerous materials.

Fortunately, compared to my student days, it has now become much easier to check the background of an applicant, thanks to the use of Al. I scan their social media activities.

Democratising science & tech, via indigenous R&D



JITENDRA SINGH
UNION MINISTER OF STATE FOR
SCIENCE AND TECHNOLOGY

IN the ancient epic Mahabharata, the sage Vyasa tells us that knowledge is the greatest power. Eleven years ago, when Prime Minister Narendra Modi took office, he rekindled this timeless truth with a modern resolve. To make India not just a minuscule of global science, but its creator too. Looking back today, one can say with reasonable degree of confidence that 11 years of technology-driven transformation is heralding India's future ascent.

And, as we mark over a decade of this transformative journey, the Department of Science and Technology (DST) stands as a testament to that vision—where laboratories have become launchpads and innovation has become the new synergism for development.

When I assumed ministerial charge of the Department of Science and Technology, I inherited not just a portfolio, but a promise—a promise to rejuvenate science, democratise innovation and deliver

its benefits to the last mile. In 2014 India's scientific ecosystem was vibrant but fragmented and often not under-resourced. Research was often confined to elite institutions, and citizens rarely felt the pulse of scientific progress in their daily lives. That was the context. What followed was a conscious, calibrated and courageous effort to reimagine the role of science in nation-building.

The transformation began with a simple yet profound shift—placing trust in our own talent. The establishment of the Anusandhan National Research Foundation (ANRF) in 2023 was a watershed moment. For the first time, India created a statutory body to steer its research and development (R&D) ecosystem with strategic foresight. Over 6,300 young scientists were empowered through the PM Early Career Research Grant and 1,754 SC/ST researchers got support under the Inclusivity Research Grant. This ensured that scientific excellence was no longer the privilege of a few, but the pursuit of many.

But we didn't stop at funding individuals—we built institutions. The National Quantum Mission, with its four thematic hubs across IITs and the IISc, is positioning India at the frontier of quantum computing, communication and sensing. The National Supercomputing



TOUCHING LIVES: 40 Women Technology Parks have trained over 11,000 women in scientific trades. *ANUSANDHAN*

Mission has already deployed 28 high-performance systems across the country, enabling breakthroughs in everything from flood forecasting to drug discovery. These are not just machines—they are the engines of a new India.

Yet, the true measure of scientific progress lies not in PETAFLOPS or patents alone, but in the lives it touches. Consider the smart agri-station developed at IIT Bombay that allows farmers to monitor soil and weather conditions in real time, or the Doyang ATM from IIT India that which empowers visually impaired citizens to access banking services with digni-

The message is clear: Every child with a curious mind is a potential scientist, and every village can be a cradle of innovation.

ty, or the 40 Women Technology Parks that have trained over 11,000 women in scientific trades, turning homemakers into entrepreneurs. These are not isolated innovations—they are the building blocks of an inclusive, empowered society.

Climate change, one of the greatest challenges of our time, has also found a resolute ally in science.

Through the National Mission on Climate Change, we have established 20 State Climate Change Centres and supported over 2,000 research papers and 1,000 reports. From mapping Himalayan glaciers to training over 1.8 lakh stakeholders, scientists are not just

studying climate change—we are preparing India to adapt, respond and lead.

Equally transformative has been the investment in human capital. The INSPIRE programme has supported over 75,000 university students and 5,000 doctoral researchers. The MANAK scheme has brought over 2.5 lakh school-level innovations to the national stage. The message is clear: Every child with a curious mind is a potential scientist, and every village can be a cradle of innovation.

We have also redefined the geography of science. The North-east, once seen as a periphery, is now a hub of soft-fibre cultivation and drone-based geospatial mapping. Through the efforts of the North East Centre for Technology Application and Reach (NECTAR) and the Survey of India, over 2 lakh villages have been mapped with their resolution, giving rural citizens legal titles to their land and a new sense of security.

Beyond these numbers lies a deeper narrative—a narrative of trust, talent, and tenacity. Trust in our scientists, talent in our youth and tenacity in our policies.

The Rs 1 lakh crore Research, Development, and Innovation (RDI) fund announced in the 2025-26 Budget is not just a financial commitment—it is a declaration of intent. With a dedicated Rs 20,000 crore allocation

and a Deep Tech Fund of Rs 10,000 crore, the government is inviting the private sector to co-author India's scientific destiny.

As we look ahead, the road is both challenging and exhilarating. Emerging technologies like AI, robotics and space science will demand not just investment, but imagination. The task is not merely to keep pace with the world, but to set the pace. And in doing so, we must ensure that the benefits of science reach every citizen—whether it is a tribal farmer in Arunachal Pradesh, a schoolgirl in Jharkhand or a start-up founder in Bengaluru.

Science is not just about solving problems—it is about expanding possibilities. It is about lighting a lamp in the darkest corners of our society and showing that knowledge, when guided by compassion and courage, can truly transform a nation.

As we celebrate 11 years of the Modi government, I am reminded of what Prime Minister Narendra Modi often says: This is not just a government, it is a movement. A movement to make India *śaśvata*, globally respected and deeply humane. And in that movement, science is not a spectator—it is a protagonist.

Let us continue to dream, to discover and to deliver. For in the laboratory of democracy, every experiment in science is an experiment in hope.

हमारे इनोवेशन के केंद्र में हैं आम नागरिक



जितेन्द्र सिंह

अतीत पर गौर करते हुए आज कोई भी पूरे विश्वास के साथ कह सकता है कि प्रौद्योगिकी से प्रेरित परिवर्तन के 11 साल भारत के भावी उत्थान के सूचक हैं। ये विज्ञान एवं प्रौद्योगिकी विभाग (DST) के उस विजन का प्रमाण हैं - जहां प्रयोगशालाएं लॉन्च पैड बन चुकी हैं और नवाचार (इनोवेशन) राष्ट्रीय विकास का नया मुहावरा बन चुका है।

अनुसंधान पर ध्यान। परिवर्तन की शुरुआत अपनी प्रतिभा पर भरोसा करने से हुई। 2023 में अनुसंधान नैशनल रिसर्च फाउंडेशन (ANRAF) की स्थापना एक महत्वपूर्ण घटना थी। पहली बार भारत ने रणनीतिक दूरदर्शिता के साथ अपने अनुसंधान और विकास (R&D) इकोसिस्टम के संचालन के लिए एक वैधानिक निकाय बनाया।

क्वांटम कंप्यूटिंग पर फोकस। हम सिर्फ अनुदान देने तक ही सीमित नहीं रहे, हमने भी संस्थान बनाए। IIT और IISc में चार विषयगत केंद्रों के साथ राष्ट्रीय

क्वांटम मिशन देश को क्वांटम कंप्यूटिंग, संचार और संवेदन के क्षेत्र में अग्रणी स्थान पर स्थापित कर रहा है।

भविष्य की तैयारी। वैज्ञानिक प्रगति का सही मापदंड इससे प्रभावित होने वाले जीवन में है। IIT बॉम्बे में विकसित स्मार्ट एग्री-स्टेशन दूरदराज के क्षेत्रों में किसानों को रियल टाइम में मिट्टी और मौसम की स्थिति की निगरानी में सक्षम बनाता है। IIT भिलाई का दिव्यांग ATM दृष्टिबाधित नागरिकों को बैंकिंग सेवाओं तक सम्मान भरी पहुंच देता है। 146 महिला प्रौद्योगिकी पार्क बने, जिनमें 11,000 से अधिक महिलाओं को वैज्ञानिक व्यवसायों में प्रशिक्षित किया है। हमने 29 राज्य जलवायु परिवर्तन केंद्र बनाए हैं और 2,000 से अधिक शोधपत्रों और 1,000 रिपोर्टों में सहायता दी है। हिमालय के ग्लेशियरों की मॉनिंग से लेकर 1.8 लाख से अधिक हितधारकों को प्रशिक्षित करने तक हम भारत को अनुकूलन, प्रतिक्रिया और नेतृत्व के लिए भी तैयार कर रहे हैं।

जमीन पर अधिकार। मानव पूंजी में हमारा निवेश भी उतना ही परिवर्तनकारी रहा है। इंसायर कार्यक्रम ने



कॉमन रूम

विश्वविद्यालयों के 75,000 से अधिक छात्रों और 6,800 डॉक्टरेट शोधकर्ताओं को सहायता दी है। मानक योजना 2.5 लाख से अधिक स्कूल-स्तरीय नवाचारों को राष्ट्रीय मंच पर लाई है। वहीं पूर्वोत्तर अब केसर की खेती और ड्रोन-आधारित भू-स्थानिक मानचित्रण का केंद्र बन गया है। नेक्टर और भारतीय सर्वेक्षण विभाग के प्रयासों से 2 लाख से अधिक गांवों का 10 सेमी रिजॉल्यूशन के साथ मानचित्रण किया गया है, जिससे ग्रामीण नागरिकों को अपनी जमीन पर कानूनी अधिकार और सुरक्षा की नई भावना मिली है।

निजी क्षेत्र से सहयोग। हमारे युवाओं में प्रतिभा और हमारी नीतियों में दृढ़ता है। 2025-26 के बजट में घोषित 1 लाख करोड़ रुपये का अनुसंधान विकास और नवाचार कोष मात्र एक वित्तीय प्रतिबद्धता नहीं बल्कि इरादों की घोषणा है। 20,000 करोड़ रुपये के समर्पित आवंटन और डीप टेक फंड ऑफ फंड्स के साथ हम निजी क्षेत्र को भारत के वैज्ञानिक भाग्य के सह-लेखन के लिए आमंत्रित कर रहे हैं।

दुनिया संग कदमताल। आगे की राह चुनौतीपूर्ण और रोमांचकारी दोनों है। AI रीवॉल्यूशन और अंतरिक्ष विज्ञान जैसे उभरते तकनीकों के लिए न केवल निवेश बल्कि कल्पना की भी दरकार होगी। हमारा काम केवल दुनिया के साथ तालमेल रखना ही नहीं है बल्कि रुख निर्धारित करना है। ऐसा करते हुए हमें यह सुनिश्चित करना होगा कि विज्ञान का लाभ हर नागरिक तक पहुंचे - चाहे वह अरुणाचल प्रदेश में कोई जनजातीय किसान हो, झारखंड की कोई स्कूली छात्रा हो, या बेंगलुरु का स्टार्टअप संस्थापक।

(लेखक केंद्रीय विज्ञान एवं प्रौद्योगिकी राज्य मंत्री (स्वतंत्र प्रभार) हैं।)

20/6/25

Don't Bother With 'Mother Tongues'

The term 'mother tongue' is so soaked in sentimentality, that it often escapes scrutiny. It suggests an innate, genetic allegiance to a particular language—usually the first one spoken at home, the one coded into lullabies and scoldings. But peel back that emotional varnish and what remains is a concept more sociopolitical fiction, less linguistic fact. So, when anyone waxes eloquent on the 'specialness' of a mother tongue, know that such 'maternal' linkage is—in today's era of locational, societal and linguistic fluidity—anachronistic.

Language isn't umbilical. It's circumstantial. You don't speak Marathi, Malayalam or English because of maternal osmosis. You speak it—or a mixture of all three—because of proximity, social dynamics, schooling, etc. The



3-5-yr-old child is a blank slate soaking in the world, languages (and biases) included. She is likely to pick up the conversational language of, say, her ayah, rather than of her mum. If a Gujarati-speaking mother has a job in Dubai and has enrolled her kid in an English-medium school, the kid's

so-called 'mother tongue' might be armed with diphthongs and shaky Gujarati.

'Mother tongue' implies that linguistic identity is permanent and singular—that there is one true language nestled in 'one's soul' while all others are 'foreign' implants. This is romantic bunkum: people outgrow languages, switch them for communicative ease, or lose them entirely in diaspora. The term also smacks of some kind of purity test. Bureaucrats ask for it in forms, ministers extol its virtues. It's really complex-ridden linguistic gatekeeping disguised as heritage preservation. Retire the phrase, not because it's silly but because it's inaccurate. Call it 'comfort language(s)', instead. *et/28/6*

The case for English in India

Its foreignness long gone, English is the passport to social and economic mobility

Language is politics by other means in India. Which is why Union home minister Amit Shah's clarification that the Centre is not opposed to any foreign language is significant. In the same vein, he added that "there should be an urge to glorify one's own language". A few days earlier, Shah had lit a small political fire with his remarks that "those who speak English will soon be ashamed". This remark was interpreted by Opposition leaders as a backdoor attempt to impose Hindi on non-Hindi speakers. The BJP has always been in favour of making Hindi the official language of the country and eliminating the use of English, a potentially explosive issue in the non-Hindi-speaking states of southern India. Now, Maharashtra, again a state that has a history of strong linguistic identity, has become restive over the BJP-led government's move to introduce Hindi as a language from primary classes.

The case for English in India is simple. First, it is the language of opportunity and economic mobility. Second, it is also the language of aspiration, a secular means to become urban and modern, and possibly, transcend the chains of caste and class. And, third, it is the word of the world, and the passport to the world of ideas. In the case of India, it has been a convenient link language immune to the legacies of local dominance. This is the reason the founding fathers of the republic, who fought the British, found no reason to outlaw the language in independent India. In fact, they saw the opportunity in English proficiency and encouraged its use, without discriminating against local languages. In the process, English has been well assimilated within Indian society to the extent that it may have lost its foreignness. It is no longer perceived as the language of economic and cultural imperialism, but as a vehicle that has enabled India's rise as a knowledge power. That's why China is encouraging English learning.

Does this mean a rejection of Indian languages? Certainly not. Much of India is bilingual, if not trilingual, and is likely to remain so. As per Census 2011, only 259,000 people reported English as their mother tongue or first language, but 83 million said it was their second language. In comparison, over 520 million called Hindi their first language as compared to 55 million for Gujarati. These numbers hardly suggest a threat from English to Hindi or any Indian language.

As for Indian languages, state governments could promote local languages. In fact, the Centre should call off its push to promote Hindi nationally and disperse the funds to states to promote local languages. This is important as local languages are repositories of cultural inheritance. However, the choice of learning a language should be left to citizens. It should also be kept in mind that the growth of English in India has happened without too much State patronage: People embrace it because of its economic utility. Languages that cease to be of transactional value face the threat of losing their prominence even in their motherland; no amount of polemics or policy imposition can rescue them. For instance, a report in this newspaper last week showed that the government spent ₹2,532.59 crore on the promotion of Sanskrit between 2014-15 and 2024-25 — 17 times the combined spending of ₹147.56 crore on the other five classical Indian languages, Tamil, Telugu, Kannada, Malayalam and Odia. But there's little to show for this.

A nuanced policy that does not privilege or discriminate against any language is the sensible option for India.

28/6

TRIPPING ON REFORM

DU's new tie-breaker for undergraduate admissions could bring back anxieties that CUET was designed to eliminate

WHEN DELHI UNIVERSITY (DU) adopted the Common University Entrance Test (CUET) for undergraduate admissions in 2022, it was seen as a long overdue step toward standardisation of a sprawling ecosystem. An improvement over the Central Universities Common Entrance Test introduced in 2010 for a handful of central universities, CUET promised to level the playing field by replacing the uneven Class XII cut-off system with a single, uniform test. It was an opportunity to move beyond the disparities of state boards, streamline admissions, and focus solely on merit. Though premised on fairness, some of the changes to the admission process this year — especially the addition of Class X scores as the penultimate tie-breaker, supplanting alphabetical order of candidates — tread a delicate line. In a country where access to higher education remains intensely competitive and deeply consequential, they risk reintroducing anxieties that CUET was designed to eliminate.

With 71,624 seats across 79 undergraduate programmes in 69 colleges up for applications this academic year, the new tie-breaker has been designed to offer, as DU's dean of admissions has put it, a "more rational and merit-based approach" to break CUET deadlocks. Class X performance is a reliable indicator of consistency, arguably less vulnerable to coaching-driven score inflation. It also reduces the arbitrariness of alphabetical tie-breakers, which, though neutral, fail to reward academic effort. However, it risks undermining CUET's foundational principle, rooted in the spirit of the National Education Policy (NEP) 2020, which advocates for equity and inclusivity in higher education. In decoupling undergraduate admission from board variability, CUET sought to ensure that scores alone did not dictate a student's future. Reintroducing board scores from Class X opens up old vulnerabilities. State board curricula and grading systems continue to vary widely in difficulty and leniency. As a result, students from better-resourced boards or urban backgrounds may gain an unintended advantage. Moreover, NEP 2020 encourages holistic assessments over rigid reliance on any single score. Shifting the focus to grades — especially one from years prior — might be counterproductive for students who have matured academically in the years since or had faced personal setbacks at that stage.

Instead of tying the admission process up with three separate academic records — CUET, Class XII, and Class X — a possible alternative could have been the option of more granular tie-breakers within CUET itself; its scores could have been extended to more decimal places or to domain-specific section scores. As India reimagines its higher education architecture, policymakers must be careful that efforts to fix procedural gaps do not reignite old apprehensions or come at the cost of inclusivity. 5/20/12

A multilingual classroom

That's what we need. CBSE's turn to the mother tongue demands structural shifts and classroom autonomy



KRISHNA KUMAR

THE DECISION TAKEN by the Central Board of Secondary Education (CBSE) to switch the focus of early primary years to the mother tongue is, to say the least, momentous. With a circular, the board plans to upend the history of education in its prestigious schools. If the circular succeeds, the outcome will be nothing less than a revolution. Future historians will struggle to explain this accomplishment. Some will surely ask: "If it was so simple, why couldn't the board do it many years ago?" The CBSE is a relatively small board compared to the state boards, but it enjoys higher status and influence. Barring exceptions, CBSE schools use English as a medium from the earliest grades. Several state boards have conceded the centrality of English relatively recently, apparently to align themselves with the CBSE. Now that the latter has announced its resolve to displace English in the early years of schooling, will these state boards follow? If that happens, it will doubtless be a beautiful dawn of systemic sanity.

No philosopher or policymaker has ever endorsed the centrality of English over the child's mother tongue. Vivekananda, Rabindranath Tagore, M K Gandhi — they all advocated the primacy of the mother tongue. J P Naik — the designer of educational policies in the early years of Independence — saw the dominant position of English in leading schools as a terrible contradiction. As the member-secretary of the Kothari Commission (1964-66), he pleaded for a sincere implementation of the three-language formula. Under this hallowed mantra, the child's mother tongue ought to be treated as the first and most important language at school. In his book published soon after his death in 1981, Naik lamented the fact that the three-language formula had been implemented piecemeal or sidelined entirely.

He once told me a story that rings like an allegory today. Following the Kothari Commission report's approval, Naik said the Maharashtra government issued a circular. It referred to the commission's recommendation of "child-centred education". The Maharashtra circular directed all schools to ensure that child-centred education was practised with immediate effect. In fact, the circular threatened official action against defaulting school heads. The point of this story was that circulars don't necessarily work, especially when they intend to soften an entrenched practice. Wider effort, involving social collaboration, is required.

It is now a popular, socially accepted fact that English is the language of upward mobility. The parallel view that English is a colonial legacy and should therefore be displaced may have political utility, but it has little traction, particularly among the traditionally deprived social groups. They recog-



C R Sankar

nise that the children of the dominant classes and their leaders benefit from their ease with English. This view goes along with the notion that command of English requires early induction. By sticking to the use of English as a medium of teaching in every subject, elite schools — as most CBSE schools are — have consolidated these popular perceptions of English. Indeed, this perception is a key factor driving the growth of private schools, especially in the northern belt where the state system is weak and poorly managed.

The CBSE's move blinks at this wider reality. Instead of explaining what is problematic about early induction into English, the CBSE wants to sound innocent in its sudden advocacy of the mother tongue or the regional language. Laudable though this new mission is, it calls for sustained preparation and considerable investment. Apart from private schools, Kendriya Vidyalayas (KV's) will require more than nudging if they are to pay greater attention to children's home language. As a privileged segment of the CBSE family, KV's have been silently copying the practices of English-medium private ("public") schools. Many years have passed since the day I noticed that Grade I children in a KV in Delhi could not name all the days of the week in Hindi. It was nobody's wish to make children monolingual English speakers so early in life; KV's were merely following a social trend. Being evasive about the omnipresence of English-medium education is probably a policy compulsion, but it amounts to a preference for snoozing in a make-believe world.

If the child's own language is to find some appreciative space at school, countless euphemisms will have to be sacrificed. Some of these serve as a political shorthand; others are related to frozen pedagogies. Experienced teachers know that language is not merely literacy, however foundational it may be. Sounds, rhymes and words contain

It is now a popular, socially accepted fact that English is the language of upward mobility. The parallel view that English is a colonial legacy and should therefore be displaced may have political utility, but it has little traction, particularly among the traditionally deprived social groups. They recognise that the children of the dominant classes and their leaders benefit from their ease with English. This view goes along with the notion that command of English requires early induction. By sticking to the use of English as a medium of teaching in every subject, elite schools — as most CBSE schools are — have consolidated these popular perceptions of English.

intimate, imagined meanings for small children. Sensible teaching lets these meanings develop new forms; misconceived schooling throttles them, imposing dictionary meanings through tests and competition. In our system, the child's language is the first casualty. Prematurely acquired capacities to recite and spell run parallel to rote numeracy. These practices run counter to the basic principles of child-centred teaching.

If the CBSE wants to improve language learning at early stages, it will have to look beyond publicised priorities. As an examination board, its focus is naturally on tests and outcomes. Currently, this focus has intensified. New technologies have exacerbated this tendency. Language learning during childhood is an aspect of intellectual growth that demands a generous teacher and diversity of resources. Music, drama and other means of aesthetic expression also enhance children's linguistic strength. A multilingual classroom is best suited to achieving these aims.

The education system is accustomed to treating language like a subject. It is taught with the purpose of ensuring success in tests. In recent years, this systemic tendency has worsened. Distrust of the teacher has led to a general, undeclared policy of denial of autonomy. In KV's, teachers must abide by a nationwide convergence of weekly completion schedules. This practice compels every teacher to complete each segment of the syllabus or textbook at the same pace as others. Practices in private schools are not very different from this norm. There is little room in such a system to permit teachers to pursue curricular goals at their own pace. The transformation of such a system cannot be achieved with a circular and a brief re-orientation.

The writer is former NCERT director and the author of *The Child's Language* and the *Teacher and Padma*, zara sochna

2024/13

Beyond the blackboards: Future-proofing skill education for the Gen next

The Central Government's decision to introduce vocational education from Grade 6 under the 'Samagra Shiksha Abhiyan' signals a long-overdue shift towards skill-based learning. However, unless this reform is backed by robust infrastructure and industry collaboration its purpose may be defeated

**FIRST
Column**

The Union Government's initiative to integrate vocational education starting from Grade 6 under the 'Samagra Shiksha Abhiyan' is a progressive step aimed at addressing the glaring gap between academic learning and employability. As India strives to become a \$5 trillion economy, it is essential to equip its youth with skills early on. However, without a solid strategy, strong alignment with industry needs, and adequate infrastructure, this initiative risks becoming another well-intentioned yet poorly executed reform.

The Stark Skills Gap

The India Skills Report 2024 indicates that only 47.2 per cent of Indian youth are deemed employable, primarily due to a mismatch between the skills taught in educational institutions and those needed in the job market. A mere 4.3 per cent of individuals aged 15 to 59 have received any formal vocational training, compared to over 75 per cent in Germany and 50 per cent in China. This highlights the urgent need for a comprehensive overhaul of India's vocational education system, from early integration in schools to the development of market-relevant skill training programs.

Learning from Global Leaders

India has the opportunity to learn valuable lessons from the German Dual System, which effectively combines classroom education with practical apprenticeships in various industries. Approximately 58 per cent of German students opt for vocational pathways after completing secondary school. Similarly, China boasts 11,300 vocational institutions and nearly 31 million enrolments, producing 10 million skilled graduates each year.

These graduates support sectors ranging from services and manufacturing to artificial intelligence (AI). South Korea's impressive 96 per cent employment rate among vocational graduates is a result of rigorous standardisation and quality assurance. These examples serve as replicable blueprints, particularly in terms of industry collaboration and ensuring curricula.

Patchy Progress Across States

West Bengal's Odisha Bangla scheme, which offers vocational courses in nearly 1,000 schools, is an ambitious model. Annually, over 600,000 students are trained across various sectors, including agriculture, hospitality, information technology, and healthcare. However, limited alignment with industry partners diminishes job placement opportunities.

In contrast, states like Punjab, Haryana, and Tamil Nadu maintain close collaboration with industries and polytechnic institutes, facilitating smoother



transitions from school to work.

States such as Andhra Pradesh and Karnataka have taken a step further by aligning their vocational courses with future-oriented fields, including renewable energy, AI, robotics, and robotics. This initiative aligns with the Skill India Digital Vision 2034.

Infrastructure and Implementation

The National Education Infrastructure Survey 2023 reveals that 38 per cent of Government secondary schools still lack essential laboratory and workshop facilities. In Punjab, urban areas generally perform better, while rural regions continue to struggle with facility shortages and outdated equipment.

The poor effectiveness of previous initiatives, such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), highlighted that high enrolment numbers did not necessarily lead to employment, pri-

INDIA HAS THE OPPORTUNITY TO LEARN VALUABLE LESSONS FROM THE GERMAN DUAL SYSTEM, WHICH EFFECTIVELY COMBINES CLASSROOM EDUCATION WITH PRACTICAL APPRENTICESHIPS IN VARIOUS INDUSTRIES. APPROXIMATELY 50 PER CENT OF GERMAN STUDENTS OPT FOR VOCATIONAL PATHWAYS AFTER COMPLETING SECONDARY SCHOOL.

marily due to inadequate training quality. A phased implementation model — starting with urban centres and gradually expanding to rural districts — can ensure that infrastructure, faculty, and educational content develop in tandem.

Bystander to Stakeholder

A 2023 survey by FICCI and IY reveals that 70 per cent of employers in India are facing skill shortages, yet only a small percentage are actively participating in vocational training programs. In Gujarat, effective Public-Private Partnerships (PPPs) in Industrial Training Institutes (ITIs) have successfully developed demand-driven courses and updated curricula.

Karnataka's collaboration with major tech companies, such as Infosys, Wipro, and Bosch, to train high school students in coding, data analysis, and mechatronics serves as a replicable model for other states. On the other hand, West Bengal remains dependent on Government-led initiatives and needs to advance industry collaborations, not only

for curriculum design but also for internships, apprenticeships, and certifications.

Quality Through Accountability

Since 2015, the Skill India Mission has certified over 1.3 crore individuals; however, only about 50 per cent of these individuals have secured employment. One of the main challenges is inconsistent quality. There is an urgent need for third-party audits, employer-validated certifications, and real-time tracking of placements to ensure transparency and accountability.

Singapore's Workforce Skills Qualification (WSQ) system is considered a benchmark, as industry councils update training modules quarterly in response to labour market needs. India must invest to streamline National Skill Registers and adaptive learning platforms aligned with the vision outlined in the National Education Policy.

A Five-Point Reform Agenda for the Future

1. **Curriculum Modernisation:** Shift the focus from traditional trades to high-growth sectors such as electric vehicle (EV), renewable energy, robotics, artificial intelligence (AI), and healthcare technology.
2. **Manufacturer-Industry Partnerships:** Each school offering vocational courses must partner with an industry or sector skills council to co-design the curricula and conduct evaluations.
3. **Digital-First Infrastructure:** Utilise the upcoming Skill India Digital Platform to provide virtual labs, remote mentorship, and modular learning opportunities, even in rural areas.
4. **Quality Assurance Mechanisms:** Establish a National Vocational Education Quality Council (NVEQC) to oversee standards, conduct audits, and implement employer feedback systems.
5. **Incentivising Adoption:** Offer tax benefits to companies that provide apprenticeships and performance-linked grants to schools based on their placement records.

Need for Deeper Reforms

India boasts one of the youngest populations globally. To transform this demographic dividend into a developmental advantage, practical skills must start early. Integrating vocational education from Grade 6 is a positive step; however, without significant reforms, it risks repeating past mistakes.

Vocational education should not be considered a fallback option. With the right policy initiatives, infrastructure improvements, and strong corporate partnerships, vocational education can lead India towards a capital revolution. It is time to move from inaction to implementation, as skills will become the new currency in the future of work.

(Bhaskar is Co-Founder and MD of GEMS International, a Training Partner with the NSRF. Views are personal.)

DISCOVERY OF A VOICE

The question of who should speak for Adivasis has never been satisfactorily addressed. Non-tribals or outsiders' research on them is somewhat sceptically regarded by Adivasi scholars; it needs assessment from the tribal groups themselves. Sonajharia Minz, a professor at the Jawaharlal Nehru University, has decided to create a digital archive of tribal languages. She is the Unesco co-chair of Transforming Indigenous Knowledge Research Governance and Rematriation and shares her Chair with a Canadian professor of Simon Fraser University. Ms Minz plans to create digital platforms to be used by different tribal groups, which will contribute accounts of their knowledge and culture. What is exceptional in this project is that these platforms will not be freely

accessible. The tribal groups themselves will decide if they want to share their material and also with whom they wish to share it. For the first time, the Adivasis will speak for themselves, make decisions about sharing their knowledge. They are afraid of exploitation. So far, research has tended not to give credit for their knowledge, even if non-tribal people use it for themselves. In Canada, there are already such proprietary platforms.

Ms Minz's analysis points to a deep conflict between the languages, cultures and knowledge of tribal people with those of the modern mainstream. This alienation began in colonial times. Adivasis have to forget their language and culture and train them-

selves in terms of contemporary education in order to be on the job market. Forgetting language means rejecting an entire culture, including food and songs and the activities of everyday life. Ms Minz's decision to document languages on a digital platform is a way of keeping traditions alive. It is for the future when young people are looking for their past. She is also planning a curriculum for early education in tribal languages. That, too, is most important. The alienation of tribal children begins in schools where the teacher speaks a different language.

Not only is this a culture shock but it also slows comprehension.

Ms Minz claims that there is now a critical mass of tribal experts throughout the country. It seems a propitious time for Adivasis to speak for themselves. But the project itself

is based on irony as well. Without the modern system of education, of which Ms Minz and the tribal experts are beneficiaries, the digital archive with proprietary platforms would not have been possible. What is needed is a golden mean, where modern education and tribal culture go hand in hand and students are not forced to forget their language. The planned curriculum for early education in tribal languages is just a step in that direction but it is not enough. It is for the tribal experts and other academics to collaborate in finding curricula that will give the choice of keeping up with tribal history, language and culture of the tribal group a student comes from. Only then will Adivasis be fully vocal. ✓✓

The plan for a digital archive for tribal languages, culture and knowledge is welcome

The importance of statistics

KK SEN

The significance of statistical methodology can be understood from the contributions made by famous statistician and pioneer of India's first Five Year Plan, Prof PC Mahalanobis, who was born on June 29, 1893. To commemorate his outstanding contribution to the field of statistics, June 29 is celebrated as National Statistical Day. According to him, statistics should be used for better understanding and reporting of scientific and engineering data, and for decision-making for the welfare of society. He undertook experimental design in agriculture and made an important discovery relating to the probable error, which put him on par with RA Fisher, the great statistician. Among his most significant contributions to statistics, the 'Theory of Sample Surveys' can be highlighted which began with the estimation of area and yield of the jute crop in Bengal in 1937, and it was established that estimates based on sample surveys were often more accurate than those obtained by complete enumeration. Sample surveys can yield estimates with a narrow margin of error within a short span of time and with minimal expenditure.

Complete enumeration carries the risk of non-sampling errors, which may occur due to a faulty questionnaire, an honest mistake by the persons interviewed, or insincerity of the enumerator. Sample surveys are subject to sampling errors, but these errors can be reduced by increasing the sample size. Sampling error is inversely proportional to sample size.

Statistics represents a fundamental method of data analysis, which is applicable to any observational science. One of the first field applications is the method of random sampling to estimate the acreage and yield of crops over a large region. Nowadays, we often say that there is a bumper production of rice in the current year compared to the previous year, but this estimation is based on the 'crop-cutting survey' undertaken by statisticians in a highly scientific manner.

We commonly talk about advancement of our economy, but this can be justified only by calculating Gross Domestic Product (GDP) or per capita income, which is based on statistical methodology. Thus, the importance of statistics can be appreciated in every field of investigation, whether in agriculture, industry, or education. The average number of successful students in an examination, or the percentage of success in a year compared to previous years, is analysed by using statistical methods. The most well-known indicator of inflation is the Consumer Price Index, which measures the percentage change in the price of a basket of goods and services, and is computed by applying statistical methodology.

Apart from data collection, the importance of statistics lies in data compilation, analysis, and, finally, decision-making. The critical aspect of data collection is that it must be

Statistics are like clay, from which one can mould either a devil or a god.

accurate and reliable, which depends on the sincerity of enumerators as well as respondents. Wrong or inaccurate data may create a wide gap in data analysis, leading to improper planning.

Statistics are very helpful to a State as they facilitate administration. In modern times, States make extensive use of statistical data to solve various problems. Before enforcing a policy, a State must examine its pros and cons, and this can be done only with the help of numerical data. In our day-to-day life, large volumes of data are collected to accomplish various activities.

Modern statistical methods and data are increasingly useful in research across various fields. Even in medical science and public health, statistical methods are used efficiently to test the efficacy of new medicines and treatment methods. In industry and commerce, statisticians carry out different types of research, such as identifying the sources and causes of variation in product quality. The technique of quality control used in these cases is entirely statistical in nature. Market research is conducted by making extensive use of statistical methods. Bankers, stock brokers and insurance companies also utilise statistical technology to forecast probable boom or depression in business cycles. The theory of probability – a concept in statistics – applies itself to various fields of business and commerce.

Despite its usefulness, the science of statistics is sometimes looked upon with suspicion and condemned as a tissue of falsehood. It is often said that statistics are the lies of the first order. This indicates that the science of statistics has been dishonoured, even in modern times, despite its indispensable role in all aspects of human civilisation. Sometimes, figures supporting a statement may not be true due to incompleteness, inaccuracy, or deliberate manipulation by biased individuals who wish to present a false image for personal gain. The fault in such cases does not lie with the science of statistics, but with those who misuse it. If wrong figures are used, they are bound to produce a biased conclusion. Therefore, it is the responsibility of those who use the data to ensure that the figures are free from bias and are analysed most scientifically.

Statistics are like clay, from which one can mould either a devil or a god, depending on the sincerity of the statistician. If anything goes wrong in statistical analysis, it is not the fault of the science, but the result of the mischief of those who handle it. It is thus necessary that whenever we use statistics, we should first ensure that they are properly collected and suitable for the contextual issues.

(The author is a retired Director of Statistics, Government of Assam.)

ART/29/6

Rutu Mody-Kamdar

During a session on consumer behaviour in an MBA class, the discussion was on the rise of D2C brands in India and the shifts in how young consumers make choices. Midway, a student asked, "Ma'am, what are the top three points I should write if this comes in the exam?"

I paused; not because it was a 'wrong' question but because it was such a narrow one. Here we were, dissecting the complex interplay of aspiration, identity, digital influence, and social currency and the question was reduced to a list. It struck me then how our entire approach to learning had moved from understanding to extracting. From wonder to utility. From "Why is this happening?" to "What should I write?"

We're living in a world of fast answers. Of Google summaries, bullet points, AI-generated notes, and 60-second explainer. Where knowledge is accessible but curiosity is optional. But here's the thing: the smartest people in the room are rarely the ones with the fastest answers. They're the ones asking better questions.

Questions matter

In higher education, curiosity shouldn't be a luxury. It should be the compass. Whether you're studying Business, Engi-

neering, Design, or Law, your ability to ask layered, thoughtful, open-ended questions is what takes you from surface-level familiarity to real understanding. A student in a media studies class once asked, "Why do Indian news channels use red tickers and dramatic music? Do viewers prefer that?" That opened up a conversation on psychology, sensationalism, and public trust. It wasn't in the syllabus. But it was education at its best. Good questions don't just clarify; they open windows.

But not all questions are equal. The ones that truly sharpen thinking and signal a keen mind fall into a few key types:

Bridge Questions: "How does this connect to something I already know?" For example, in a sociology class, "Is the way we view marriage today shaped more by Bollywood or tradition?"

Lens-Shifting Questions: "Who's missing from this narrative?" For example, in a course on development economics: "What would this data look like if we asked women in rural India instead of urban youth?"

What-if Questions: "What changes if one factor is flipped?" For example, in a history class: "What if the printing press had never been invented? How would power have shifted?"

Uncomfortable Questions: "Is this idea as neutral as it seems?" For example, in a branding lecture: "Are luxury brands truly aspirational? Or do they thrive on social inequality?"

Questions like these show independent thinking. They show that the student is not just absorbing information, but playing with it. Part of

the problem is systemic. We've been conditioned to chase grades, not growth. To optimise for output, not exploration. Even the classroom rewards memorisation over meaning. Part of it is cultural too. In a hyper-connected, hyper-competitive world, there's pressure to sound smart, not curious. We are afraid of asking a question that makes us look like we don't know.

Ask away

But the truth is that every breakthrough, every innovation, every deep insight begins with not

knowing. The willingness to ask is a quiet form of courage. So how do you rebuild the curiosity muscle? Here are a few simple practices:

Begin a Questions Log

After each lecture, note one question that wasn't answered. Doesn't matter how random. Track it over a semester; you'll be amazed.

Teach It backwards

Imagine you have to explain today's topic to your younger sibling. What questions would you ask to help them get there?

Slow the scroll: Next time you see a trending topic, don't just read the summary. Ask yourself: "What's the larger issue here that no one's talking about?"

Sit With Confusion: Instead of rushing to Google for every doubt, give yourself five minutes to think. Mull. Doodle. Let your brain try first.

Years from now, when you're working on a business plan, crafting a policy, designing a product, or making a big life choice, what will matter is not whether you remembered every framework or formula. It's whether you knew how to ask: "What's going on here?", "Who does this impact the most?", "What am I not seeing yet?" Because that's what smart looks like. Not fast. But curious.

The writer is the founder of Jigsaw Brand Consultants.

45/15

The lost art of curiosity

In higher education, curiosity shouldn't be a luxury. It should be the compass.

GETTY IMAGES/ISTOCKPHOTO

Language of unity

Uniformity should not be confused with national unity in language policy

The National Education Policy (NEP) 2020 mandates that all students across the country must learn three languages in school. Theoretically, NEP 2020 is more flexible than the previous versions of the three-language policy in India, which have always faced resistance not just in south India but also different States. Hindi is only one of the many Indian languages, and States are free to choose any two Indian languages and one foreign language in the mix of three, according to NEP 2020. However, the fear that Hindi will become the default option as the second Indian language apart from the native language is aggravated by Maharashtra government's attempts to prioritise Hindi over other regional languages and its continuing vacillation on the issue. The State has now withdrawn its decision that Hindi will 'generally' be taught until Class five, as the second Indian language, after it kicked off a political storm in the State and put the ruling Bharatiya Janata Party (BJP) on the back foot. A committee headed by Dr. Narendra Jadhav will now deliberate with all stakeholders on the relevance of the three-language policy. Chief Minister Devendra Fadnavis has said the government would accept its recommendation. This change of heart comes after estranged cousins Uddhav Thackeray and Raj Thackeray, legatees of a strident version of Marathi pride that often turned into violent xenophobia, came together to oppose what they see as "imposition" of Hindi. Evidently, the language issue is uniting political rivals against the BJP.

Languages associated with power gain more influence but attempts to force languages on people on the back of political power can be divisive. The paradox is that the BJP sees the three language policy as a question of national pride and unity. It is clear that most students, including those in India's Hindi-speaking regions, want to learn English. According to Maharashtra Minister Ashish Shelar, nearly a fifth of students in the State are learning a third language and the new policy would give that option to all students. There are 15 languages including Hindi available in schools under the third language option, and when at least 20 students demand a language in a school, it will be taught. While this sounds noble and politically neutral, the actual implementation is different. Hardly anyone in Bihar has learnt Tamil or Malayalam or Kannada or Telugu under the three language policy so far. The chances of an overwhelming majority of students ending up with Hindi as part of the three-language policy is high. No State or school can offer a vast range of languages. The BJP must reassess its language policy taking into account the responses that are emerging from different parts of the country. It must learn the language of unity.

W30/6

Harvard vs Trump: The battle for academic freedom in a polarised America

Education is a driver of change, development, and human enlightenment; it helps individuals to question, experiment, and explore, leading to regulated change. When supported by the community and Governments, it brightens up at a faster speed, opening new horizons. The research throws light that empowers the researchers to explore further; it is a continuous project. The communities gain from it in human welfare, while the Governments and businesses gain by profiting. To control who gains the most engenders politics of conflicting interests.

That is the main impulse of the current feud between the Trump administration and Harvard University. While Harvard aims to promote liberal ideologies encouraging free speech and the right to protest unjust and inhuman actions, the Trump administration aims to contain the proliferation of liberal ideologies. President Donald Trump has been spinning a narrative of packing in 'America's burden' policy of supporting international students, migrant labour, and political seekers as a solution for the problems of the local population. The politics of ideological conflicts come to the fore in the exchange on social media and press statements on the sidelines of formal communication.

Trump has gone on to accuse Harvard faculty of colluding with the Communist Party of China, while those rejecting the charges have called the Trump Government policies reminiscent of McCarthyism of the 1940s.

As to the formal war between Harvard and the Trump Administration, responding to Harvard's lawsuit on May 23, 2025, a US district court in Massachusetts has ruled that the U.S. Department of Homeland Security (DHS) May 22, 2025 order revoking Harvard's Student and Exchange Visitor Program (SEVP) certification is restrained till the next hearing on May 29, 2025. The court has blocked DHS from "implementing, instituting, maintaining, or giving effect" to the revocation of Harvard's eligibility to enrol international students and sponsor international scholars.

Describing SEVP as a privilege and not a right, the DHS issued a letter on May 22, 2025, revoking Harvard's SEVP certification, which meant that Harvard could not admit foreign students on F- or J-nomination status for the 2025-2026 academic year, and existing foreigners on F- or J-nomination "must transfer to another university in order to maintain their non-immigrant status."

To avoid SEVP privilege revocation, Harvard had been advised to provide within 72 hours all the information related to on — or off-campus activities by its non-immigrant students allegedly against others in the last five years. In response to the Government action, Harvard chose to challenge it in court, communicating to the Harvard community that the revocation was against

Harvard's refusal to submit to the federal Government's illegal assertion of control over its curriculum, faculty, and student body.

In a series of actions, the Trump administration wrote a letter to Harvard on April 11, 2025, charging it with failure to "justify federal investment."

To rectify its failure, the university was advised to (a) reduce the power of students, faculty, and administrators; (b) share all admissions and hiring data for a comprehensive audit; (c) prevent the admission of "students hostile to the American values... and Semitism"; and (d) commission an external party, acceptable to the federal Government, "to audit the student body, faculty, staff, and leadership for viewpoint diversity" and "the programs and departments that most fuel anti-Semitic harassment or reflect ideological capture." (e) discontinue "all diversity, equity, and inclusion (DEI) programs, offices, committees, positions, and initiatives..."; (f) reform "its student discipline policies and procedures"; (g) establish procedures to protect anyone reporting "noncompliance with the reforms..."; (h) make "organisational changes to ensure full transparency and cooperation with all federal regulators."



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executive action."

Although the university has acceded to correcting some of the lapses during protests against the Gaza war, it has refuted the charges of any planned discrimination against Semitism. It has rejected the conditions as a requirement to get a \$2.2 billion federal grant and tax-exempt status.

In the meanwhile, the federal Government's 'stringent' conditions on Harvard have drawn strong reactions from many academics, activists, and political leaders, including the Jews, criticising the Trump administration for using anti-Semitism as a weapon to act upon universities for their ends.

Whether the Trump administration will gain anything politically from the continuing feud is ambivalent, but the damage to the work and values that the USA has been claiming to stand for

is definite. Harvard may or may not lose the federal grant, but it has retained its character through its unflinching resistance to the Government pressures to surrender its DEI programmes.

Its strength to resist comes not from its classroom activity alone but from its community programmes of capacity building and its socially relevant research and education. According to a Study on the Global Economic and Social Impact of Harvard Alumni, the alumni of Harvard University have created 146,429 jobs globally. Harvard's socially relevant inventions include baking powder, organ transplantation, oral rehydration therapy (ORS), functional MRI, portable surgery, logical quantum processors, and gene-editing medicine.

Harvard created the world's first MBA programme in 1908. Harvard has about 5800 patents to its credit.

Harvard works for the welfare of its neighbourhood community. It partners with local communities to provide apprenticeship and internship opportunities for youth. "As of August 2024, Harvard was the 5th largest employer of Massachusetts residents and the largest in the city of Cambridge." According to a report, Harvard's revenue for work comes from philanthropy: endowment income and gifts (45 per cent); education: tuition, housing, and food sales (11 per cent); research (federal grant 11 per cent + non-federal 5 per cent = 16 per cent); and other sources (18 per cent). Harvard spends the federal grant on research. Although Harvard is financially as well as academically strong, the freeze of the 2.2 billion dollar federal grant and the tax-exemption status will affect its research programmes.

While the 'feud-theatre' and the 'gain-loss narrative spinning' exercise continue, there is enough stuff for the Indian and the rest of the world's universities to learn from:

1. The universities have to nurture the values of equity and inclusion and of internationalism to gain a wider exposure environment for their learners and knowledge creators.
2. To do that, the universities must reach out to the community for support rather than overdependence on Government grants.
3. To gain the community's support, the universities must relate their knowledge and research to the community for its welfare and capacity building.
4. The universities must create work cultures for skilling and knowledge to the highest standards for the physical, psychological, socio-cultural, economic, and spiritual welfare of the community.

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