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FROM CHALKBOARDS TO CHATBOTS: INTEGRATING GEN AI INTO K-12 EDUCATION

DR SANKU BOSE

As technology invades every aspect of our lives, one of the most profound transformations will be how students go about the learning process. The advent of Generative Artificial Intelligence (Gen-AI) is reshaping K-12 education. No, it's not just altering how students learn but also redefining the very role of educators and the traditional structure of learning environments. While the potential of this technology is immense, it comes with its own set of challenges. As India stands on the brink of major educational reforms, understanding the global experiences with AI integration can offer valuable insights.

One of the most celebrated advantages of Gen-AI is its ability to personalise learning. Unlike traditional classroom models that often apply a "one-size-fits-all" approach, AI can adapt to the individual pace, strengths, and needs of each student. Systems driven by AI can analyse student performance data to create customised pathways thus allowing a child struggling in mathematics to receive extra practice, while a student excelling in literature moves ahead at an accelerated pace. This level of personalised attention, once limited to elite private tutoring, could become accessible to millions if implemented thoughtfully.

Another major boon is the automation of grading and feedback. Teachers, often burdened with administrative tasks, can now delegate repetitive grading to AI tools, freeing them to focus more on interactive teaching and mentorship. Immediate, detailed feedback from AI also helps students learn from their mistakes in real-time, fostering a more dynamic learning cycle.

Gen-AI, further, enhances the availability of learning resources. Interactive simulations, virtual labs, tailored quizzes and even AI-driven creative writing prompts are already enriching classrooms in countries like the USA, South Korea and Finland. These innovations make subjects like science and history come alive, offering students experiential learning opportunities that textbooks alone could never provide.

However, the picture is not uniformly rosy. We should be mindful of pitfalls as well. The biggest risk associated with AI in education is over-reliance. Critical thinking, creativity, and interpersonal skills — the cornerstones of holistic development — cannot be nurtured solely through algorithmic interactions. If students depend excessively on AI-generated solutions, they risk becoming passive consumers of information rather than active problem-solvers.

Privacy and data security also remain significant concerns. Gen AI systems collect vast amounts of sensitive data about students' habits, weaknesses, and preferences. Without robust safeguards, there is potential for misuse, breaches, or commercialisation of personal data. Countries like Germany have already introduced strict data privacy laws governing the use of AI in schools — a lesson India must heed as it drafts its own policies.

Equally alarming is the threat of widening the digital divide. While affluent urban schools in India are already experimenting with AI-driven classrooms, millions of students in rural or underprivileged areas lack even basic internet access. Without concerted efforts to bridge this gap, AI could deepen educational inequities rather than alleviate them.

Internationally, countries provide varied blueprints for AI integration. In Singapore, AI is used not just to teach core subjects but also to monitor student well-being, predicting potential mental health issues early. In Estonia, known for its digital-first initiatives, students are introduced to AI concepts as early as primary school, ensuring technological literacy from a young age. Meanwhile, the US approach remains decentralised, with schools and states experimenting independently, creating pockets of innovation and sometimes inequality.

The NEP 2020, which emphasises experiential learning and the use of technology, provides a timely platform to integrate AI thoughtfully into Indian schools

For India, these examples offer both inspiration and caution. A centralised strategy focusing on equity, teacher training, and ethical AI usage could yield transformational results. The NEP 2020, which emphasises experiential learning and the use of technology, provides a timely platform to integrate AI thoughtfully into Indian schools.

Moving forward, a balanced approach is crucial. Teachers must be trained not only to use AI tools but to teach students how to use them responsibly. Policymakers must prioritise data privacy, accessibility, and inclusivity to ensure that AI becomes a bridge rather than a barrier.

The integration of generative AI into K-12 education heralds an exciting era — one that could make learning far more engaging and effective. But realising this vision demands careful policy direction, constant vigilance, and a steadfast commitment to human-centric education. As we prepare our youth for a rapidly evolving world, the choices we make today in blending AI with education will shape their and the nation's future for decades to come!

The author is the Group CEO of TechAno India Group, a visionary and an educator. Beyond his corporate role, he is also a mentor who guides students towards resilience and self-discovery

A GROUND REPORT FROM FRONTLINES OF TRUMP'S CRACKDOWN

Fear And Silence On US Campuses

Chidanand Rajghatta | TNN

Photo: Chidanand Rajghatta

FOOD FOR THOUGHT: International students at George Mason University, Virginia, feast on pani puri

Fear stalks American college campuses. It is not just students staying away from speaking out, but academics and administrators, too. At the George Mason University in Northern Virginia, hosting more than 4,000 international students out of 40,000 on its 677-acre campus, no one wants to speak on record about the 15 foreign students at the varsity whose F-1 visas have been scrubbed, though both students and faculty know about the revocation.

The Dean's office directs you to the Human Resources Office, which directs you to the Student and Academic Affairs department, which sends you to the Office of International Programs and Services. Finally Melanie Belog, an executive director in the university's Communications office, a former journalist herself, forwards a statement from college president Gregory Washington that acknowledges the revocation of 15 international students' visas but says "these terminations have occurred without involvement of or prior notice to the university". More of that later.

For now, it is the palpable fear and foreboding across US campuses that is striking. This is America, land of the free and home of the brave, where the lure of academic freedom, peerless instruction, and vibrant engagement attracts more than a million students from all over the world, bringing in an estimated $44 billion annually to the American kitty. That's being shredded. No one knows why. "This administration is working to destroy the core of America's brand equity and its greatest assets... (including) a terrific education system that has attracted talent from all over the world," says Dipankar Chakravarti, professor of marketing at VirginiaTech, which, like George Mason and scores of other universities, is also in ferment.

Don't Quote Me, Please

It's not just foreign students, even Americans, teachers and students alike, are in a funk. With rare exceptions, the few who talk ask to speak off the record with no names and no close-up photographs. Universities in Moscow and Beijing could well be more open. This is more like North Korea. An American faculty member who opened up to talk about the "red lines" and "high-wire" the university is having to navigate to retain govt funding, later sent frantic texts asking not to be quoted.

The mood at the University of Maryland, College Park, north of the capital, is a little more relaxed: unlike Virginia, which has a Republican administration (so universities here face double pressure from the federal and state administrations), Maryland is Democrat-run. Schlepping out to play pickleball after a day's grind, three desi undergrad kids open up after some bantering. "We don't need this pressure. As it is, we are worried about summer internships," says Hemant, who like his buddies Rajesh and Ayush, is studying supply chain. "They've spent the past week banging in 100 applications for internships across the US. Things are not looking good, especially with the tariff standoff casting a dark shadow on the economy."

Outside the Graduate Hills apartment on Campus Drive, Hari from Kakinada and Mahesh from Chennai are doom scrolling in the warm spring evening as cherry blossoms wilt before the looming summer. They arrived in the US in Jan for the spring semester, just as the Trump administration took charge. They find it hard to believe foreign students are getting visas revoked for minor traffic infractions. Having been here for just over three months they don't drive yet. Between getting settled in winter, where's the time to buy or lease or rent a car and get a US license and beat the 60-day window in which the international driving permit expires?

It's the last thing on their mind though they've heard a couple of desi students had their visas revoked — because they were driving with expired permits. Right now, their lives revolve around the shopworn shibboleth for desi grad students: Apartment-Department, Adviser-Budweiser. There's no regret though about coming to the US; they reckon the fuss will eventually die down. "Actually my parents are more stressed out than I am. They keep calling every day to check how I am doing," says Hari, gently suggesting "the Indian media should not hype up coverage". Nope, he has no interest in politics or activism, and has never participated in a protest. But he will now make sure he doesn't get anywhere close to one given what happened to Ranjani Srinivasan, the grad student at Columbia who had to self-deport after getting caught up in the anti-Israel drama in Columbia University.

CULTURE KNOCKS ON: A US student grooves to a Bollywood beat

Indian Student Surge In US May Stall

(In lakh)	Indian students	Total foreign students
2015-16	1.7	10.4
2016-17	1.9	10.8
2017-18	2.0	10.9
2018-19	2.0	11.0
2019-20	1.9	10.8
2020-21	1.7	9.1
2021-22	2.0	9.5
2022-23	2.7	10.6
2023-24	3.3	11.3

Source: Open Doors

Wonderful Part Of US Campus Life

Back across the capital at George Mason, Lori Clark, adjunct professor at the School of Dance and Music, is teaching a Bollywood dance class outdoors in the campus square. A score of mostly foreign and American students tuck into the pani puri and jalebi spread she has laid out before first swaying to a dandiya song and then going into 'Tutak Tutak', 'Balam Pichkari' and other desi hits. "Who knows when they will decide Bollywood can't be part of American or MAGA culture?" she muses. America has come a long way from the early days of globalisation when she lived in Delhi's Defence Colony ("near the gurdwara") studying dance forms in movies like Pakeezah and Mughal-e-Azam.

In the motley dance group, Tarani, an engineering undergrad from Hyderabad, is hanging out with Savannah, an American student with Down Syndrome. Tarani is not formally in the dance class; she's studying IT. But she's assisting Savannah as part of her campus work at the Mason LIFE Program for young adults with intellectual and developmental disabilities. "I don't know if I would ever have such an experience in India," she says about her work with the special needs student. "It's a unique and wonderful part of my American campus life." And now MAGA is blowing it up with a crude and witless campaign against foreign students, purportedly because they are "taking away our jobs".

University administrators are spooked on two fronts. One the Trump crackdown on DEI (Diversity, Equity and Inclusion) and classroom teaching it regards as discriminatory, with threats to withhold funding. And two the potential drying up of lolly from foreign students who constitute a significant revenue source. Either will doom US universities, but scorching foreign intake will have deleterious long-term impact. It is the massive research investments that created a platform for contributions from a global community of scientists in multiple fields, VirginiaTech's Chakravarti points out, not to speak of a "core commitment to free speech, innovative thinking, and an open judiciary (even if flawed in implementation)" that spread across the world. In some universities, international students constitute more than a quarter of the intake, going up to an astonishing 52% at the storied Carnegie Mellon and 40% at Columbia University. With 24% international students, the University of Illinois in Urbana-Champaign's moniker — "UIUC" — was once dubbed "University of Indians and University of Chinese".

By that token, George Mason is less vulnerable (around 10% international). "To our 4,000 international students and our 38,000 American students, we care about your well-being, and we are doing everything possible to maintain a stable, positive scholarly environment for you," University president Gregory Washington said in a letter to the student community. He says the visa terminations (since held in abeyance) "have occurred without involvement of or prior notice to the university". But it is a small comfort in the broader sense. International students don't feel welcomed in America beyond the campus. "I've always wanted to go back home to India, but now I'm ready to return sooner. I'm so done," says Tarani.

> We don't need this pressure. As it is, we're worried about summer internships
> — Hemant | SUPPLY CHAIN STUDENT

An American faculty member who opened up to TOI to talk about the "red lines" and "high-wire" the university is having to navigate to retain govt funding, later sent frantic texts asking not to be quoted

Universities are spooked on two fronts: Trump crackdown on DEI (Diversity, Equity, and Inclusion) and the potential drying up of lolly from foreign students who constitute a significant revenue source

In some universities, international students constitute more than a quarter of the intake, going up to an astonishing 52% at the storied Carnegie Mellon and 40% at Columbia University

HOW TRUMP'S GONE AFTER COLLEGES
A TIMELINE

Jan 20 Trump orders a freeze on all federal funding (grants, loans, and aid to educational institutions) pending assessments to ensure they aren't promoting "Marxist equity", "transgenderism", or "green new deal social engineering policies"

Jan 29 Issues an executive order to combating antisemitism at educational institutions. It particularly targets "alien students and staff" for monitoring

Feb 5 Department of Education places at least 50 employees on administrative leave as part of a broader crackdown on Diversity, Equity, and Inclusion (DEI) initiatives

Mar 7 Trump administration revokes $400m in federal grants and contracts to Columbia University, citing alleged failure to combat antisemitism

Mar 8 Mahmoud Khalil, a Palestinian student and lawful US permanent resident, is arrested over his involvement in anti-Israel protests

Mar 11 Ranjani Srinivasan, a Columbia University student from India, voluntarily leaves US after her visa is revoked by Department of State on March 5 over allegations that she had supported Hamas

Mar 25 Hundreds of international students get email from Department of State (DOS) asking them to self-deport owing to campus activism

Apr 14 Trump admin freezes $2.2 billion in grants to Harvard over campus activism

Apr 23 Trump signs executive action calling for harder enforcement of a law requiring colleges to disclose their financial ties with foreign sources

Apr 29 Probe launched into Harvard University and the Harvard Law Review citing reports of race-based discrimination

TRIBUNE, (P- 6), 01 MAY 2025

Regulating school fee

Delhi frames Bill to counter profiteering

AFFORDABLE and quality education for all — that's a key goal of the National Education Policy, 2020. A big roadblock on this ambitious path is the economic exploitation of parents by many private schools that are solely or primarily driven by the profit motive. The lack of adequate checks and balances has fuelled rampant commercialisation in the education sector. In a welcome move, the Delhi Cabinet has approved a Bill to regulate fee in all schools in the national capital, prescribing fines up to Rs 10 lakh for any hike without proper approval. The Bill, likely to be tabled in the Assembly soon, proposes the formation of committees at the school, district and state levels. These panels will examine fee hike proposals by school managements in a transparent and time-bound manner. The objective is to protect hapless parents from arbitrary decisions that reek of sheer extortion — a take-it-or-leave-it scenario in which the school authorities hold all the aces.

Several states, including Gujarat, Rajasthan and Tamil Nadu, have their own legislation to regulate the fee structure of schools. However, state governments have repeatedly found themselves embroiled in court battles over this matter. In 2021, the Supreme Court upheld the constitutional validity of the Rajasthan Schools (Regulation of Fees) Act, 2016, confirming the state's right to prevent profiteering in education. Recent protests by aggrieved parents have prompted the BJP government in Delhi to come up with a regulatory Bill.

The legislation has tried to incorporate clear-cut enforcement provisions so as to minimise disputes between educational institutions and governments. Private schools often justify fee hike on the grounds of providing better facilities to students and higher salaries to teachers. However, most of them are reluctant to disclose details of income and expenditure. Such opacity leaves parents ill-informed and makes them more vulnerable to being milked dry. It is hoped that robust legal safeguards will deter schools from treating education as a cash cow.

TRIBUNE, (P- 7), 01 MAY 2025

Navigating IIT dream

LEKHA ROY
ACADEMIC AND WRITER

A TEENAGER studying for 12-14 hours a day at a coaching centre hopes to get into the best engineering college and land a job in a multinational company. The sheer joy of getting into an IIT makes all the hard work worth it. The well-oiled machine, perfect in calculations, is now well on its way to success. Yet, even before the sheen wears off, the machine starts stuttering, struggling to cope with falling grades and a wearying knowledge of a growing burden. The setting up of a national task force by the Supreme Court in March to investigate the suicides is a recognition of the pressures that students face as they fight to stay in the race.

Stepping into the competitive world reveals the baggage of every student — a huge financial and emotional investment that builds on the dream of a powerful future. However, while admission to an IIT is seen as a sure ticket to success, what the student faces, once in, is a microcosm not very different from the world outside. While accusations of casteism, language barriers and social isolation lurk in most corridors, a life snuffed out after months of silent cries for help reflects the effect of the aspirational burden on critical thinking and basic life skills. The result? Committees that highlight individual mental health problems while giving a clean chit to the structure that fails to identify such problems in the first place.

Many IITs have a psychiatrist and a counsellor who advise students, but the grades do not reflect the development needed. The recent suicide by a BTech student at IIT-Ropar highlights the plight of students who give in to the pressures.

Statistics reveal that most students who opted out of life belonged to marginalised sections of society and failed to achieve grades that would attract the best in the corporate world. It would generally leave you with a huge debt and the social ostracisation of being at the bottom would mean that you were no longer part of the elite.

What is worrisome is the lack of support. An RTI filed by Dheeraj Singh, founder of the Global IIT Alumni Support Group, in 2023 revealed that more than 115 students had died by suicide in IITs since 2005.

What leads to students taking the extreme step? Is it more a cry for help than a genuine desire to give up? However, suicide is usually a spontaneous action, which many regret, albeit too late. "I hope my life is saved," the student admitted to the PGIMER, Chandigarh, whispered in his final days.

Struggling alone becomes a causal factor to obfuscate rational decision-making. It is critical to identify the problem at this stage.

While the JEE Mains is now conducted in 13 languages, once the student is admitted to BTech, he is expected to be on a par with his peers fluent in English. A general language course rarely helps a student for whom the extra year of study is also a burden in terms of opportunity cost. A few private universities do invest in a language trainer. However, lack of empathy for students on the margins makes the "reserved category" a pejorative identity marker.

Another factor is individual resilience. For most students, engineering is a ticket for social mobility. It is the vulnerable few who need help. Academic pressure is compounded by expectations, and the inherent hierarchy that marks colleges in India can crush the softer spirit. Mental health surveys would identify dangers.

Is the performance tracked of candidates who took the exam in native languages? Is there equity in placements? Should there be a minimum grade in English for admissions? How far does the system build resilience? The government must consider these questions. For, students are our assets.

ASSAM TRIBUNE (P-6), 03 MAY 2025

Disturbing trend

The just-declared Higher Secondary (HS) results with a noticeably dwindling trend in Arts, Science and Commerce streams have exposed some disturbing aspects in the way education is being imparted and managed in the State. The concerns range from lacunae in teaching to periodical monitoring of performance to the lack of teachers' training. Despite the declining pass percentages in both HSLC and HSSLC, education is being imparted in the same lackadaisical, routine manner without any thought on bringing in innovation. While the Science stream, traditionally among the best-performing, recorded a pass percentage of 84.88% – significantly lower than last year's 89.88%, the Commerce stream did not fare better with 82.18% compared to 87.66% the previous year. Humanities students suffered a similar slump, recording 81.03% pass percentage compared to last year's 88.36%. Even the Vocational stream took a severe beating, plunging to 68.55% from last year's 85.78% – the biggest slide among the four. Not just the HS results, the HSLC results, too, had recorded a dismal 63.98% pass percentage, a steep fall from 75.7% in 2024 and 72.69% in 2023, making it the lowest in three years. This consistent downward trend across disciplines should naturally worry educators, parents and policymakers alike. But, going by the lethargy of the Education Department and its bigwigs, it seems they are little bothered by the disquieting developments.

The situation, which is strongly indicative of poor human resource management, warrants a rethink on the way education is imparted and managed in the State. While we are having the annual shows of Gunotsav in our schools, those are apparently not yielding much. The need is to make these assessments take stock of the perennial lacunae that plague the learning process in our educational institutions. Let there be innovative approaches vis-à-vis teaching. Teachers in particular have to be alert and monitor the understanding and progress of students in classrooms. Over-reliance of students on the internet could also be a factor in making classroom learning somewhat less important for many students. Such behavioural aspects, too, need to be assessed and addressed. Teachers must also be given a liberal atmosphere for imparting education and the practice of burdening the teachers with unwarranted non-academic responsibilities must be done away with immediately. It is shocking that our government has failed to treat the sphere of school education in the seriousness it deserves. School education being the foundation of all learning, any drawback hindering quality education stands to cause a colossal loss of human resources. No investment can be too high to improve the spheres of school and HS education. Every aspect of school education from teachers' training and school infrastructure to discipline in campuses has to be accorded top priority to bail out our ailing education sector. Systemic changes in schooling structure, teacher training, and student support mechanisms are what we need.

DECCAN HERALD (P-8), 03 MAY 2025

BEYOND CLASSROOMS

Universities should defend the global commons

They must reposition themselves as custodians of shared resources such as climate and biodiversity

NEIL TANNEN AND PAUL NEWMAN

The UN Sustainable Development Goal 4 speaks of quality education – one of the key areas in the higher education sector is to move towards holistic education including sustainable development, especially addressing the challenges of climate change.

In 2023, countries signed a landmark agreement to safeguard the high seas, welcomed by ocean scientists whose work was used to lobby for it. It is a signal of the increasing role of universities as custodians of the "global commons" that entails shared resources such as climate, oceans, and digital data. These commons are under increasing stress, and experts warn that human actions are alarmingly harming them. Through such adversity, universities can play a crucial role in the 21st century. Universities can and should defend the global commons; many are already doing so.

Climate change and ocean conservation challenge traditional government and market solutions. These circumstances mandate that universities have a distinctive and essential role to play in supporting governments and society at large. Universities possess special assets for that task. They carry on research over generations, synthesise knowledge across disciplines, participate in worldwide networks, and seek the common good rather than profit. Universities train the young while looking to the future. In short, they possess the vision and knowledge to safeguard our global treasures.

This ethical responsibility is going mainstream and it is high time Indian universities caught up with the leading global institutions. The SDGs rank safeguarding global commons such as oceans, biodiversity, and climate where the market fails, as a priority. Universities, shielded from immediate pressures, can address problems of society in the long term. Scholars have immense responsibility; when they identify threats to the future of humanity, their institutions must step up and rectify the wrongs.

University labs churn out important research in climate science and clean energy, and academics make significant contributions to the technical skills that underpin international climate reports. For example, economists and policy analysts at universities have contributed to the design of effective carbon pricing policies to reduce emissions. Some universities have committed to significantly reducing their carbon emissions. Arizona State University, with 100,000 students, went carbon-neutral in 2019, demonstrating that even big institutions can reduce or offset greenhouse gas emissions. Student activism has prompted many universities to divest from fossil fuels; some have made formal commitments to divest from coal, oil, and gas in investment portfolios. Through research projects, institutional pledges, and public outreach, universities are actively participating in climate mitigation and resilience.

Conservation efforts

Biodiversity, another critical global common, has not escaped academia. Universities are using their know-how and sometimes their grounds to save species and ecosystems. In Ecuador, the Universidad Hemisferios has created a vast biodiversity reserve in the Amazon foothills. There, researchers, and students collaborate with local communities to drive conservation, actively guarding water sources and halting illegal mining and deforestation. This is a case of a university openly defending part of the global ecological commons. Meanwhile, universities around the world are coming together for nature. More than 500 higher education institutions in more than 100 countries have joined the Nature Positive Universities network – a coalition co-chaired by the University of Oxford and UNEP that is committed to restore ecosystems on campus and exchange ideas to increase biodiversity.

The seas, described as the world's largest commons, also benefit from the participation of universities. Marine experts from various institutions across the globe have long been involved in efforts to regulate the world's fisheries, protect coral reefs, and negotiate agreements related to the high seas. Duke University, for instance, has an institution dedicated to high-seas governance, having its faculty and students actively involved in United Nations Ocean forums, offering valuable data and legal analysis on how to regulate the high seas as the world's common heritage. The scientific and policy underpinning of the High Seas Treaty (2023) has been influenced by academic experts, thus ensuring that ocean biodiversity beyond national seas has adequate protections based on empirical evidence. Through their contribution of expertise, they ensure that ocean governance is underpinned by scientific thought and serves world interests as much as, if not more than, national interests.

The internet makes it possible to exchange information around the world at high speed, but this openness must be defended, and universities are in the lead. Most scholars believe that knowledge should be a public good, not to be denied by paywalls. Universities have also been at the forefront of the open science and education movement.

If problems such as climate change, environmental degradation, or knowledge disparities remain unresolved, the environment in which universities function will be severely compromised. Consequently, universities have both an institutional and, more importantly, moral responsibility to engage in the resolution of global issues. As custodians of knowledge and educators of future generations, they have a duty to apply their intellectual resources in the service of humankind's common good. For the privilege of societal trust and support, universities are obligated to foster understanding and improve quality of life – thus becoming stewards of the global commons is a natural extension of this social compact.

The case for universities to lead in the global commons is one of pragmatic and ethical imperatives. The well-being of future generations i.e., the students in front of us, depends on decisions we take today about our atmosphere, oceans, biodiversity, and digital commons. In assuming this role, universities are being true to their highest calling as beacons of knowledge and moral wisdom for humanity. While the challenge is great, the force of impact is no less when the world's universities unite to defend our common home and future, thereby helping their respective countries to achieve the set targets of the SDGs.

(Neil is an assistant professor at the Department of Political Science, St Joseph's University; Paul is Principal, St Joseph's Evening College and a professor at St Joseph's University)

3/5/25

ECONOMICS TIMES (P-4), 03 MAY 2025

US Knowledge Inc Vs Donald Trump

Higher education in the US is under threat from White House. And since the threat isn't guided by a particular political ideology—such as, say, anti-communism—liberal universities in the US have a shot at taking on Donald Trump in court. A legal fight over academic independence is going to be expensive. It makes sense for institutions to consider collective action to defend who they can teach and hire, and what knowledge they consider worth imparting. Fortunately for US universities, they have hedged their bets between business and government, which allows them some leeway over autonomy. But they are not created equal across a wide field of private and public funding. They need a common shield against the administration's threats of funding cuts, revocation of tax exemptions and denial of research funding.

The US has a higher-education system that works. It equips the economy with class-leading skills. The market for education in America is competitive, drawing in the best talent from across the globe. The quality, and volume, of its research are extraordinary, rendering the US an unassailable comparative advantage over the rest of the world. Such a system needs to develop immunity to intervention that could undermine decades of market dominance. Trump needs American universities to Make America Great Again. In case he missed the point, its universities conferred the US its special place in world affairs. Wrecking academia is the last thing the US needs, never mind the number of low-skill jobs Trump forces American or, for that matter, Chinese companies to create stateside.

It would be interesting to see how a tactic like collective action plays out in an education system that celebrates capitalism. In a way, US universities are defending both democracy and capitalism, which between them provide the best defence to academic autonomy. Knowledge is, after all, a central assumption for efficient markets and states. ET 3/5/25

Spread the Learning Afar

M Jagadesh Kumar

International students have long been the lifeblood of elite Western universities — academically and financially. US universities have established a formidable presence in online certification and degree programmes in the evolving global education landscape. The online courses market is valued at about $251 bn in 2024, and projected to reach $1,060 bn by 2032.

For decades, American higher education has wielded two powerful tools: prestige of its degrees, and allure of internationalism. But that dominance has begun to wobble, with budgets tightening and geopolitical winds shifting.

As these institutions tighten their belts, the hunt is on for new learners, markets and delivery models. However, the real opportunity isn't for these universities to expand. It's for institutions in other countries to lead in building a new kind of global classroom: online, collaborative, affordable, and deeply rooted in technical excellence.

Top universities in India, including IITs, are its intellectual assets. In Silicon Valley, 'IIT' elicits respect. In Abu Dhabi or Zanzibar, it symbolises aspiration. In India, they are shorthand for high-quality engineering education.

Imagine a student in Chhattisgarh who joins a programme on AI and robotics designed jointly by IIT Delhi and IISc Bengaluru. A young woman in Addis Ababa earns certification in sustainable water systems through a course led by IIT Roorkee and IIT Bombay. These aren't hypotheticals. The faculty exists. The technology exists. The demand most certainly exists. What's needed is the will to think beyond silos.

Look at how American universities have played the game. Harvard and MIT joined forces to launch edX, a platform hosting programmes from more than 150 global institutions. The logic was simple: collaboration expands reach, diversifies content and pools credibility.

India's top universities and IITs are well positioned to do the same, arguably better. Because where Western platforms often price themselves out of reach, Indian institutions can offer something uniquely powerful: high-quality, skill-based certification that doesn't drill holes in the pocket.

If a young engineer in Jakarta or Juba can access a 6-month online certification from Indian institutions in ML, RE or cybersecurity for the cost of a few meals at a restaurant in San Francisco, who do you think they'll choose?

GoI has already paved the regulatory road. UGC's current online and ODL (open and distance learning) regulatory architecture provides more runway than a decade ago for designing, offering and certifying full-fledged online programmes. Platforms like NPTEL (National Programme on Technology Enhanced Learning) and SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) have shown what's possible regarding delivery.

What remains is for our institutes to step onto the global stage together. Not just as a set of campuses, but as a unified force.

When multiple IITs and top Indian universities come together to offer online skill-based certification programmes or degrees — delivered in a modular, flexible format and priced for the real world — it changes the global equation. We're talking about India emerging as a worldwide platform for high-quality online education. India can build learning platforms that are more open, grounded, and far more attuned to aspirations of millions left behind.

Here's where timing matters. Global learners, including Indian students, are now wary of expensive, unstable education routes abroad. If we can meet them with structured, quality-assured programmes — grounded in our disciplinary strengths and delivered with digital finesse — India could become a major node in the international learning network.

To capitalise on this opportunity, we must:

- Establish collaboration among Indian institutions to develop comprehensive online programmes that rival those of US universities.
- Leverage AI for personalised learning to create adaptive learning platforms that dynamically respond to diverse cognitive profiles and pedagogical needs.
- Ensure affordability and accessibility to a broader demographic, including students from developing economies, catalysing expansion of India's educational influence.
- Promote global outreach by marketing Indian online programmes internationally, highlighting their quality, affordability and relevance to global learners.

So, will Indian institutions strategically recalibrate and assert an autonomous footprint in the global learning economy? That's the real question.

The writer is former chairman, UGC

School's Out In America

Atanu Biswas

'The greatest trade deficit in the United States is not sneakers, smartphones, and automobiles; it's in undergraduate and graduate students,' Harvard Medical School faculty member David D'Alessandro wrote recently. Donald Trump's tougher immigration policies, resulting in cancellation of hundreds of international students' visas and threats of deportation, along with freezing of university grants, is likely to hurt US universities, their academic activities and the economy. Consequently, America's decades-old advantages — flexible institutions, receptiveness to talent and capacity to attract creatives — are shifting into reverse.

Numerous universities are suspending admissions to graduate programmes due to cuts in STEM research grants, which support many international graduate students. A 2020 paper, 'A passage to America: University funding and international students' in the American Economic Journal: Economic Policy claimed that during the past 20 years, there has been a sharp rise in the number of international undergraduate students attending US public research universities, coinciding with a decline in state funding.

Getting a little tense out there

Since public research institutions depended on full-fare-paying foreign students to cushion consequences of declining budgets, these trends are closely connected. As local enrolments stagnate, US colleges and universities have attracted growing numbers of international students, who frequently pay full tuition and contribute substantial funds to colleges. In effect, these students are subsidising domestic students.

Over three-quarters of international students pay for their education mostly on their own, according to Institute of International Education (IIE). 81% of overseas undergrad students and 61% of grad students fully fund their tuition. If they decide to take their dollars to friendlier places, US colleges can face financial trouble.

Over 1.1 mn foreign students — nearly 6% of all students — attended US universities during 2023-24. International students pumped nearly $43.8 bn into the US economy and generated 378,000 jobs last year alone. The broader economy may suffer if these students are lost. SEVIS (Student and Exchange Visitor Information System) data shows a 130,000 drop in international students between March 2024 and March 2025, an 11% decrease. The biggest change is the 27.9% drop of Indian students.

STEM fields, especially master's degrees in computer science and engineering, have traditionally attracted many Indian students. A huge decrease in their numbers explains why bachelor's programmes have stayed steady, while master's programmes suffered a 20.52% enrolment loss. Assuming typical tuition and living expenses of about $30,000 per student, this amounts to a potential revenue loss for US institutions of up to $4 bn in a single year.

Trump 1.0 prohibited travel from seven predominantly Muslim countries in 2017, and many universities saw a decline in foreign application numbers. Federal immigration officials have now arrested students participating in university protests, cancelled student visas and searched dorm rooms. There is a possible extension of travel restrictions to 43 countries. Refusals of visas are also an important contributor.

A 2023 paper, 'Best and brightest? The impact of student visa restrictiveness on who attends college in the US', published in Labour Economics, estimated that a 10% increase in F-1 visa refusal rate results in a 12.2% decrease in new international enrolment.

India accounts for 29% of all overseas students in the US, with Chinese students coming in second at 25%. This is in jeopardy now. The Optional Practical Training (OPT) programme — a critical bridge that permits foreign graduates, particularly in STEM fields, to work in the US for up to 3 years following graduation — is to be eliminated through a new bill, Fairness for High-Skilled Americans Act. If passed, the bill will force students to either immediately obtain an H-1B work visa, or leave the country.

A recent Keystone Education Group survey found that 42% of overseas students have reconsidered studying in the US, citing visa restrictions, safety concerns and political climate as major reasons. Interest in US programmes is on the decline, with destinations like Sweden, Singapore and New Zealand becoming more popular.

Today's America may be losing its comparative edge. D'Alessandro termed it 'trade deficit', a language Trump understands.

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NAV BHARAT TIMES (P-12), 03 MAY 2025

ग़लती न दोहराएं

भुवनेश्वर में नेपाली स्टूडेंट की मौत

भुवनेश्वर के कलिंगा इंस्टिट्यूट ऑफ इंडस्ट्रियल टेक्नॉलजी (KIIT) में ढाई महीने के भीतर एक और नेपाली छात्रा की मौत होना केवल इस प्राइवेट यूनिवर्सिटी की छवि पर धक्का नहीं है- इससे भारत के विदेशी स्टूडेंट्स को आकर्षित करने के प्रयासों पर भी चोट पहुंची है। विश्वविद्यालय प्रशासन को इस बार उन गलतियों से बचना होगा, जो फरवरी में हुई थी।

भरोसा बना रहे

कूटनीतिक संकट की वजह | 18 साल की छात्रा बीटेक कंप्यूटर साइंस की फर्स्ट ईयर की स्टूडेंट थी और उसका शव हॉस्टल रूम में मिला। इससे पहले 16 फरवरी को बीटेक थर्ड ईयर की एक नेपाली स्टूडेंट ने आत्महत्या कर ली थी और उसमें एक छात्र पर प्रताड़ित करने का आरोप लगा था। लेकिन असली दिक्कत हुई विश्वविद्यालय प्रशासन की लापरवाही से और इसने भारत-नेपाल के बीच कूटनीतिक संकट की स्थिति ला दी थी। तब नेपाल के प्रधानमंत्री केपी शर्मा ओली तक को छात्रा के लिए न्याय की मांग करनी पड़ी थी।

नकारात्मक असर से बचाव | भारत सरकार ने 2018 में स्टडी इन इंडिया (SII) प्रोग्राम शुरू किया, जिसका मकसद है विदेशी स्टूडेंट्स को भारत बुलाना। अब विदेशी छात्र किसी देश में इस भरोसे के साथ जाते हैं कि वहां उन्हें समानता और सुरक्षा के साथ बेहतर शिक्षा हासिल करने का मौका मिलेगा। लेकिन जब एक ही संस्थान में इस तरह की दो घटनाएं हो जाएं, तो भरोसा टूटता है।

टॉप देशों से पीछे | अंतरराष्ट्रीय छात्रों को लुभाने के मामले में भारत वैसे भी बहुत पीछे है। 2021-22 में कुल 46,878 विदेशी स्टूडेंट्स ने ही भारत में एडमिशन के लिए अप्लाई किया था। दुनिया के टॉप एजुकेशन डेस्टिनेशन की तुलना में यह कुछ भी नहीं। 2024 में अमेरिका में 11.26, कनाडा में 8.42 और ब्रिटेन में 7.58 लाख विदेशी स्टूडेंट्स पहुंचे थे। केवल भारत से उस साल 13.35 लाख छात्र बाहर निकले थे।

माहौल सुधारना होगा | इन आंकड़ों को सुधारने के लिए देश को शैक्षणिक संस्थाओं के माहौल पर भी ध्यान देना होगा। UGC की गाइडलाइंस कहती हैं कि सभी शैक्षणिक संस्थान में ऐसी कमिटी होनी चाहिए, जो स्टूडेंट्स की विभिन्न समस्याओं को समझ और उनका निवारण कर सके। जिन कैंपस में विदेशी स्टूडेंट्स हैं, वहां इन कमिटी की जरूरत और बढ़ जाती है।

ECONOMICS TIMES (P-4), 04 MAY 2025

Is this the Era of Humanities Over Engineering?

The more the machines think, the more we must feel, question and dream

JASPREET BINDRA

In the preface to his book *The Demon-Haunted World*, Carl Sagan, the famous astronomer, recalled that when he was studying at the University of Chicago, "it was considered unthinkable for an aspiring physicist not to know Plato, Aristotle, Bach, Shakespeare, Gibbon, Malinowski, and Freud—among many others".

After all, these were the days when physicists and astronomers were expected to be conversant with the foundational works of philosophy, the arts, history, social sciences and even psychoanalysis.

Sagan's meta point was that scientific training was once inseparable from a broad humanities education. Even in ancient India and Greece, the subjects of yore were grammar, logic, philosophy and the natural sciences.

It is only in the past few decades that STEM education, with its profusion of engineering and medical degrees, has become the only measure of our educational and professional success.

Humanities came to be seen as a last resort, for those not "good enough" for BTech or MBBS. This preference for STEM has been driven by the relentless technological innovation in the last century with the internal combustion engine, digital technologies, the internet, computing, molecular biology and others reshaping our society and the education around it.

However, I believe that the most recent big technological wave of AI will change the narrative and bring back humanities and the arts, and the human skills and values shaped by it.

The launch of ChatGPT started this movement, but the tipping point is the recent advent of Agentic AI, brought to life by OpenAI's Operator and China's Manus agentic models.

While AI chatbots tell us what to do, AI agents can go ahead and do it. Agents have started drafting legal briefs, reconciling accounts, writing swathes of code and scheduling sales calls. If "software ate the world", agents are about to bite off large chunks of what we used to call work.

In the world of AI bots, answers will become a commodity. But the thoughtfulness and logic behind the questions we ask will be important

WHAT DO WE DO NOW?

The obvious anxiety follows: If they do the doing, what exactly do humans do?

I believe that humans will still be working, doing the jobs we do and running the world, but there will be a big rethink on what and how we adjust to this new AI-infused world.

Many of our core assumptions around our knowledge, education and skills will need to change, as we become co-creators with AI and orchestrators of AI agents.

For one, the questions we ask will become far more important than the answers we give. Most of us will remember our parents and teachers saying this often when we were growing up.

In the world of tomorrow, deeply researched outputs by AI bots, answers will become a commodity. However, the thoughtfulness and logic behind the questions we ask, how we frame them and how we describe the objectives and the constraints will become very important, as these will elicit the right answers and solutions from our AI co-workers.

These are what we call prompts, and the science of asking great questions is what we are terming "prompt engineering".

That would in turn mean that the values of curiosity, critical thinking and deep domain expertise to frame impactful inquiries will be the new gold standard. OpenAI CEO Sam Altman recently echoed this when he mused that "determining the right questions to pose will surpass the importance of just finding the answers".

THE NEW CODE

What is also very interesting is that whenever we frame the right question or prompt, we are actually writing code—not in Python or JavaScript, but in natural language. Software coding is nothing but the instructions we give the machine in a machine language it understands, to perform a certain task or job. With Generative AI, we now do the same, except that we do it in a human language.

Thus, English, or Hindi, or Mandarin becomes the new coding. This inversion dramatically elevates the importance of language, and how well we can use it. Our primary interface with AI agents will be the language we have learnt, and whether we have mastered its nuances of precision, clarity, context and persuasion. Thus, our felicity in how we use language becomes of paramount importance.

When we frame a prompt, we are actually writing code—not in Python or JavaScript, but in natural language. This dramatically elevates the importance of language

With AI agents increasingly handling the technical "how-to" of tasks, the human edge will lie in the "why" and the "what next". The humble subjects of humanities like language, philosophy, grammar and the arts are the ones that provide us the critical frameworks for understanding context, ethics, human motivation, creativity and critical judgment—skills that are inherently difficult for AI to replicate meaningfully.

Logic and grammar teach us the principles of clear thinking and communication, arithmetic becomes less about rote calculation and more about understanding quantitative reasoning and data interpretation.

Language gives us the superhuman ability to mould words to express the right thoughts. Thus, do not be surprised to see our children preferring humanities to the inevitable computer science or engineering education, and parents rethinking their child's future education.

BACK TO THE BASICS

AI will also drive the rise of pure sciences. AI agents excel at engineering solutions based on established principles. Discovering those fundamental principles, however, is the realm of basic sciences.

Hypothesis generation, experimental design for novel discovery, interpreting unexpected results and formulating entirely new theories demand a level of intuition, creativity and abstract reasoning that remains uniquely human.

The balance of value may shift towards thinking—deep research, theoretical exploration and foundational discovery—as opposed to solely doing or application of 'known' principles, which AI can increasingly automate.

Another possible side-effect of the coming of agentic AI will be the return of "industrial era" professions like manufacturing. AI is a cognitive technology, and its greatest impact is on jobs of the brain, rather than jobs of the hands. So, mechanical, chemical and aeronautical engineers might actually go join the industries and factories they were actually trained for, rather than join software factories to debug code. This "return to manufacturing" could be a boon for countries like India.

The industrial era rewarded muscle, the digital era rewarded logic and the agentic era will reward wisdom and curiosity. The more the machines 'think,' the more we must feel, question, and dream.

The writer is the founder of AI&Beyond and author of "The Tech Whisperer". Views are personal

Do public R&D units innovate enough?

What does a recent report highlight about research in India? What are some of the recommendations?

Jacob Koshy

The story so far:

The office of the Principal Scientific Adviser to the Government of India, Confederation of Indian Industry (CII) and the Centre for Technology, Innovation, and Economic Research have released a detailed assessment of public/state/research and development in India. In all, 244 R&D organisations, affiliated to various ministries, participated in the study. "Evaluation of Innovation Excellence Indicators of Public Funded R&D Organisations", however, controversially, omits such as those belonging to defence research, space, and atomic energy research, which make up the dominant share of India's overall R&D spend, were excluded from the study, due to the "sensitive nature" of their work. Academic institutions and universities also weren't part of the study.

What was the purpose of this study?

The survey was administered via an online questionnaire and was designed to capture the contributions of public-funded R&D organisations in areas critical to India's growth. The key question that the authors of the report sought to answer was whether these labs were largely engaged in curiosity-driven academic science, or geared towards developing products and new innovations that aligned with the demands of industry. The authors sought to "capture and evaluate" innovation indicators of public-funded R&D laboratories. "The analysis and recommendations in this report were meant to guide the public-funded R&D laboratories to increase their contributions meaningfully towards a number of Sustainable Development Goals and national priorities through their research capabilities, to help the nation navigate various challenges on the socio-economic front, from health challenges to ensuring a more diverse scientific base through opportunities for women scientists, and finally to contribute to skilling and creating meaningful employment by working alongside industry and startups," the study noted.

A significant finding is that only about 25% of the labs surveyed given incubation support to startups and only 16% provide support in 'deep tech' startups

How was it conducted?

These big-picture questions were broken down into 62 parameters. These included questions on the labs' annual spend on R&D, number of young scientists, patents filed, technologies developed, participation of women scientists and their contributions in "national missions" such as the "Deep Ocean Mission," "National Quantum Mission" etc. Labs/institutes self-selected themselves as "basic, Applied or Services" or as "hybrid" – a lab/institute whose research straddles more than one of the three research categories of basic, applied and services. All the data submitted by the labs/institutes were accompanied with the director's sign-off indicating that the submitted data was authentic and valid.

What were the key findings?

A significant finding was that only about 25% of the labs surveyed gave incubation support to startups and only 16% provided support in 'deep tech' startups. Only 15% collaborated with industry overseas and only half of them opened their facilities to researchers and students from outside. About half the labs/institutes contributed in national policies and developing technologies targeting the 'Make in India' initiative. The Skill India Mission was being targeted by around 35% of the organisations while around 30% of the organisations said they were targeting the Swachh Bharat Mission. A large number of labs/institutes reported a decrease in the number of permanent staff in 2022-23 compared to the previous year and an increased reliance – from 17,314 to 19,525 – on contractual staff. The median share of young researchers increased in 2022-23 to around 58% from 54% in the previous year. The combined budget of 185 labs/institutes increased from 19,816 crore in 2017-18 to 33,162 crore in 2022-23. The total number of scientific staff and the share of women scientists within scientific staff remained stagnant across 2018-2023.

Does the report make recommendations?

As part of its recommendations, the report advocates that every lab should be "mandated to review their existing mandates" and align themselves to "Viksit Bharat." The mandate is to focus on "critical technologies" as directed by the government, and that public-funded R&D organisations must adopt this strategy on a "war footing". They should work closely with industry, as well as each other. The report recommends setting up of Section 8 companies (non-profit organisations registered under the Ministry of Corporate Affairs) to provide support to startups, spending research and testing to startups, spending research and testing facilities and, improving cross-linkages with higher educational institutes.

America will have to pay for targeting campuses

For more than a century, the US has drawn some of India's brightest minds in pursuit of world-class education. From BR Ambedkar, who went on to draft India's Constitution, to business titans like Mukesh Ambani and Azim Premji, American universities have helped shape generations of Indian thinkers, builders, and changemakers. Today, however, under the Trump administration's increasingly hardline immigration policies, that legacy is being threatened. The consequences of these actions could reverberate for decades to come.

Frank F Islam

In recent weeks, reports from US campuses have sent a chill through the Indian student community. Thousands of international students on F-1 visas have been detained, deported, or denied re-entry for seemingly minor infractions. According to the American Immigration Lawyers Association (AILA), the records of more than 4,700 international students have been terminated by US Customs and Immigration Enforcement. Half of these students are estimated to be Indian nationals.

The reasons for these terminations range from immigration violations to allegations of advocating pro-Hamas positions. It appears though the majority of the cases stem from interactions with law enforcement. Sharvari Dalal-Dheini, senior director of government relations at AILA, told CNN-News18 last week, "Many of the so-called crimes they were charged with or picked up for are things that everyday Americans wouldn't even consider crimes, and certainly not college students."

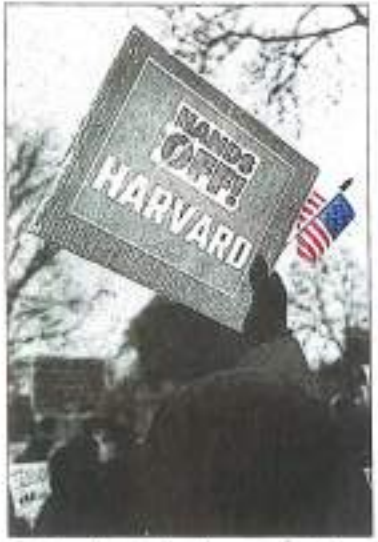
In certain instances, students were deported for traffic offences, including speeding, sometimes just five to ten miles over the limit.

There are many troubling aspects to the current crackdown on F-1 visa holders.

Most of the students impacted, according to reports, are from Asia, West Asia, or Africa, with Indian students making up the majority of them. This is not surprising since nearly 30% of all international students enrolled in US universities are Indian nationals According to the Open Doors analysis, of the approximately 1.13 million international students on F-1 visas during the 2023–2024 academic year, nearly 332,000 were from India.

A recent AILA review of 327 visa revocation cases revealed that 60% involved Indian students. This disproportionate representation of Indian students is troubling. It suggests that these students are caught in the crossfire of an administration intent on restricting legal immigration, particularly from specific regions, under the guise of security and order. Much like the administration's tariff policies, the crackdown on F-1 visa holders could have long-term negative consequences.

It is quite possible that a significant number of Indian students will choose to stay home or seek opportunities in countries more welcoming to international talent. That would not only be a loss for the students, but a setback for the US as well.



The trust broken in classrooms today may take decades to repair. REUTERS

To grasp the gravity of the current crackdown, one needs to look no further than the US tech industry. Two of the most influential and consequential companies in the world — Microsoft and Google — are led by former F-1 visa holders: Satya Nadella and Sundar Pichai. In addition, tens of thousands of former international students now occupy leadership roles across the American economy, from senior engineers and startup founders to university presidents and deans, strengthening institutions that help define the nation's global edge.

The crackdown would not only have intellectual costs. It would also have economic costs for the US. International students contribute substantially to the US economy. According to research by NAFSA: Association of International Educators, these students added $43.8 billion to the US economy in the 2023–2024 academic year and supported 378,175 jobs across the country. Indian students alone might be contributing more than $10 billion annually to the US economy through tuition, housing, and living expenses.

Universities themselves are feeling the strain. Even before this latest crackdown, enrollment of Indian students in US universities had begun to decline due to tightening visa rules, hostile rhetoric, and rising costs. Now, as stories of raids, detentions, and revocations circulate across WhatsApp groups and social media forums, this damage is accelerating. With alternatives like Europe and Australia increasingly seen as safer bets, the US is losing its reputation as a welcoming destination for international talent.

What began as a broad campaign of hostility toward immigrants — from the mass deportations of undocumented families to the demonisation of H-1B visa holders — has now turned university campuses from havens of learning into frontlines of suspicion. Sadly, for the US this moment transcends universities. At stake is nothing less than America's identity. Historically, this immigrant nation — as John F Kennedy referred to the US — has flourished because of its openness to embracing immigrants of all types including the world's dreamers, scholars, and builders. That openness is now under siege.

Unless it is reversed America will pay an enormous cost for this shortsightedness. The trust broken in classrooms today may take decades to repair. And, when the world's brightest students stop knocking, the door may never open in quite the same way again.

Frank F Islam is an entrepreneur, civic leader, and thought leader based in Washington DC.

The views expressed are personal

3,31,602

133

प्रतिवर्ष लाखों की संख्या में भारतीय विद्यार्थी विश्व के अनेक देशों में उच्च शिक्षा के लिए जाते हैं। कैसे पलट सकती है यह परिस्थिति और भारत बन सकता है उच्च शिक्षा का वैश्विक केंद्र, प्रोफेसर संजीव कुमार शर्मा का आलेख...

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70

रूपांतरकारी प्रयास और वैश्विक रैंकिंग

शिक्षा के नाम पर प्रतिभा पलायन

श्रेष्ठता के लिए हो समेकित प्रयास

व्यवस्था और मानसिकता में परिवर्तन

सबके समक्ष यक्ष प्रश्न

DECCAN HERALD (P-6), 05 MAY 2025

LEARNING EMPOWERMENT

Karnataka's RTE: A model for other states

The pioneering rules fulfil a child's fundamental right to education. They deserve to be implemented across the country

KATHYAYINI CHAMARAJ

On April 1, 2013, celebrated as the Right to Education (RTE) Day, the Karnataka High Court took up a *suo motu* case (WP 15768/2013), questioning the government as to why there were still 54,000 out-of-school children (OoSC) when the RTE Act had made elementary education a fundamental right.

As a result of this pioneering case, taken up by the then Chief Justice D H Waghela and Justice B V Nagarathna, a 'preventive protocol' for ensuring that all children are enrolled, retained and complete elementary education was incorporated into the RTE rules of Karnataka by amending Rule 6 to include Rules 6A, 6B, 6C and 6D.

The Karnataka protocol redefined 'drop out' as "continued absence of a child from school for seven days without prior permission..."; assigned a government official as 'Attendance Authority' (AA) to re-integrate OoSC within a specified timeframe by following the specified protocol; involved the Child Welfare Committee (CWC) to provide necessary support to families and, if all else failed, required the CWC to take charge of the child 'in its best interest' and place it in a free residential school.

This was to fulfil the child's fundamental right to education and the state's responsibility to ensure it. These amendments incorporated the provisions of Articles 9, 18 and 19 of the United Nations Convention on the Rights of the Child (UNCRC) into Karnataka's rules for the first time in the country for ensuring RTE.

In contrast, Section 4 of the RTE Act, 2009, which most states are following, primarily focuses on a 'curative/rehabilitative approach' in the form of bridge courses, etc., after the child has dropped out for several months. No official is designated to be accountable for every OoSC to fulfil the State's responsibility, and there is no way the State can take charge of the child if it continues to remain out of school.

Many attempts were made over several years by this writer to promote the adoption of Karnataka's 'preventive protocol' across the nation by approaching the Union Ministry of Human Resource Development and several other authorities. However, there was no response to any of these attempts.

An incentive to pursue these efforts came when a national study, 'Computation of out-of-school children based on administrative data (UDISE+ 2021-22)', by Arun C Mehta of 'Education for All in India' found, on the basis of the UDISE+ Report of 2021-22, that 1,00,20,428 children across the nation were out of school at elementary level in absolute numbers.

Using these figures, a PIL was filed in the SC (WP 158/2024) on February 27, 2024, with the prayer that the SC should direct the Ministry of School Education & Literacy (MoSE&L) to either amend

the RTE Act or ask all states to amend their rules to upscale Karnataka's 'preventive protocol' to the entire country and thus ensure that there are no more OoSC in the country.

However, the SC, while disposing of the PIL on March 7, 2024, directed that "it is open to the petitioner to apprise the central government for taking steps as prayed, who may examine the issue if felt necessary".

As per this direction, petitions were filed with the President and Prime Minister of India on August 2, 2024, to direct the MoSE&L to take steps as prayed in the PIL in the SC.

But when no response was received from the MoSE&L for more than a month, an email was sent to the SC requesting that *suo motu* action be taken by it on the matter, but no action was taken.

However, the MoSE&L responded on October 29, 2024, merely listing out the various schemes in place for attracting children to school. But it had no answer as to why despite these schemes there were still more than 1,00,20,428 OoSC in the country, indicating the failure of the state to fulfil its responsibility to ensure the fundamental right of these children.

The MoSE&L did not offer to amend its definition of 'drop out' or designate an official as Attendance Authority; there was no mention of involving the CWC in assisting parents either, all of which were the main prayers sought.

The MoSE&L failed to state why the Karnataka model could not be upscaled to the entire country by amending the RTE Act or by issuing guidelines to all state governments to adopt it.

In its defence, the MoSE&L letter stated that education being in the Concurrent List, it is the duty of states to make any changes to their rules, and that the Union government is responsible only for the schools run by it.

If this is true, it is difficult to justify how the Union government issues guidelines to all the states periodically for the better implementation of the RTE Act. A further appeal was made to the PMO on December 28, 2024, raising these issues.

Coincidentally, the Chairman of the Parliamentary Standing Committee on Education of the Rajya Sabha, Digvijaya Singh, forwarded this writer's petition to the MoSE&L and asked them to respond to it.

Also, the need for a 'preventive protocol' for retaining children in school, based on the Karnataka model, the absence of which "is incompatible with the concept of a fundamental right", has been included in Digvijaya's report to the Union government.

The committee has recommended that "the department should conduct a review of the protocols enforced by states across the country–like the well-regarded protocol in Karnataka–and suggest a model set of rules for all states".

Possibly, as a result of these interventions, the MoSE&L has issued a note on February 27, 2025, to all secretaries of the school education departments of all states/Union Territories, enclosing Govt. of Karnataka's GO of 15.03.2013 containing Rules 6A to 6D, among others "for favour of information and necessary action as deemed fit".

It is no doubt a feather in the cap of Karnataka's RTE rules, but it is only a limited success as no amendment to the RTE Act or at least a directive to all state governments to incorporate Karnataka's preventive protocol has been issued. The MoSE&L surely could have done more to fulfil its duty to ensure the fundamental right to education and life of one crore children.

(The writer is the Executive Trustee of CIVIC-Bangalore)

DH 5/6

K.P. Soman
Jijeesh T.K.

Fair and objective?

Analysing the impact of using Artificial Intelligence in assessing student work in higher education

GETTY IMAGES/ISTOCKPHOTO

The growing use of Artificial Intelligence (AI) in education is revolutionising evaluation methods and learning environments. In assessing student work, AI-based grading systems offer objectivity, consistency, and efficiency. From automated essay scoring systems to standardised exams, these technologies assert to be fair and objective assessments. However, the precision of algorithms raises some significant concerns and questions: can AI really evaluate critical thinking and creativity? More importantly, are these systems naturally biased? Do they subtly distort assessments? Is human teacher assessment really free from prejudices? Can human evaluators give equally innovative responses the same marks? Many reports from several Indian institutions have exposed incidents of biased assessments by human evaluators.

Marking subjective work

Whether the assessment is objective or descriptive, AI performs well to evaluate Engineering and scientific disciplines, particularly when given reference notes for LLMs and probable solution strategies. It can effectively review thousands of student writings, therefore relieving teachers of some of their work and guaranteeing consistent marking. But when assessing subjective work such as essays, literary analysis, or philosophical arguments, AI assessment is not so appropriate since subjectivity allows for several points of view and interpretations. The subjectivity of a student's answer cannot be constrained by strict criteria or limits.

Critical thinking and creativity do not live by strict rules. For AI, the capacity of a student to offer original viewpoints, participate in sophisticated debate, or use metaphorical and symbolic language is tough to gauge. AI sometimes struggles to understand abstract concepts, humour, irony, and creativity even while it can evaluate structural aspects, coherence, and lexical richness.

Within a limited period, AI can effectively evaluate objective-based criteria for several students. Unlike an objective-type question, a philosophical inquiry such as what is beauty lacks a single, clear response. Rather, it encourages several points of view, all of which could be reasonable. In the same vein, take Alfred Tennyson's poem, Ulysses, can offer different insights over several readings. Here, AI-assisted evaluation struggles to precisely evaluate the depth, nuance, and originality of subjective answers.

Challenges

Usually assembled from previously graded papers, AI systems learn from large datasets, which sometimes include prejudices carried on from human assessors. Studies have revealed that graduates of AI could appreciate verbose writing, criticise non-native English speakers, or undervalue unorthodox ideas that deviate from the prevalent trends in the training data.

Sometimes, contextual understanding presents challenges for AI. In literary or philosophical articles, where arguments depend on historical or cultural background, AI's incapacity to deduce some deeper meanings may lead to erroneous assessments. An AI model taught on Western literature, for instance, might not correctly evaluate a work anchored in Eastern philosophy or indigenous storytelling traditions. However, Retrieval-Augmented Generation (RAG) AI technology can help eliminate false information and increase accuracy.

One basic question arises: Should AI completely replace human teacher evaluation? Although it can help simplify tests, it is difficult to completely remove human judgement. Teachers contribute a necessary qualitative viewpoint that AI, in some circumstances, lacks. They value uniqueness in ways that robots cannot, know the complexity of arguments, and grasp the change of perspective of a student.

But, as everyone sees things differently, human assessment could potentially have aspects of prejudice. By contrast, AI-based assessment guarantees openness by following well defined, predefined standards. As the evaluation process is kept under track, any student can access their marks and the distribution of scores depending on several criteria at any moment. Human evaluation may not always allow this degree of uniformity and accessibility.

Every system of evaluation has benefits and drawbacks of its own. As many analysts advise, the best way to guarantee accuracy and fairness would be a hybrid strategy combining AI evaluation with human supervision and ongoing monitoring.

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Indians earn the most among Asian Americans

About 77% of Indians have a bachelor's degree or higher, second only to Taiwanese (83%)

DATA POINT

The Hindu Data Team

With a median annual household income exceeding $150,000, Indian Americans top the earnings chart among all Asian groups in the U.S.– about 40% higher than both Chinese and Japanese households.

As of 2023, nearly 25 million Asians lived in the U.S.– more than double the number in 2000 **(Chart 1)**. By 2023, Asians made up 7.4% of the U.S. population, up from 4.2% in 2000 **(Chart 2)**.

Among Asian groups, Chinese Americans formed the largest share at 22%, followed by Indians at 21% and Filipinos at 19%. Vietnamese, Koreans, and Japanese accounted for 9%, 8%, and 7%, respectively. Pakistanis made up 3% **(Chart 3)**.

Over time, the share of immigrants within most Asian communities has declined. In 2000, immigrants made up 63% of the Asian population; by 2023, this had fallen to 54%. Among Indians, the share declined from 73% to 66% **(Chart 4)**.

Educational attainment among Asian groups varied widely. In 2023, 77% of Indians aged 25 and older had a bachelor's degree or higher, the second highest among Asian groups. Taiwanese Americans topped the list, with 83% holding at least a bachelor's degree. Bhutanese, Burmese, Laotian, and Cambodian communities had the lowest rates **(Chart 5)**.

This education gap was reflected in income levels. Indian-headed households had the highest median annual income among all Asian groups at $151,200, followed by Taiwanese households.

Interestingly, despite 69% of Mongolian Americans holding a bachelor's degree or higher – the third highest among all groups – their median household income was the lowest, at just $54,300.

A profile of Asian Americans

The data for the charts are sourced from Pew Research Centre's "Key facts about Asians in the U.S."

Chart 1: The chart shows the Asian American population in the U.S. Figures in millions

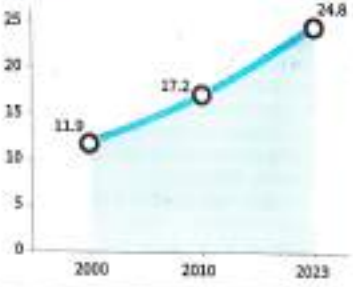


Chart 2: The chart shows the share of Asians as part of the U.S. population. Figures in %

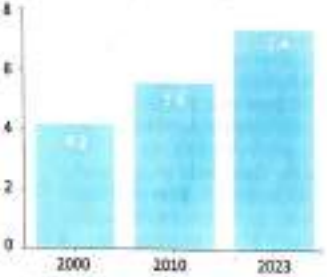


Chart 3: The origin-wise share of Asian population of the U.S. as of 2023 (in %)

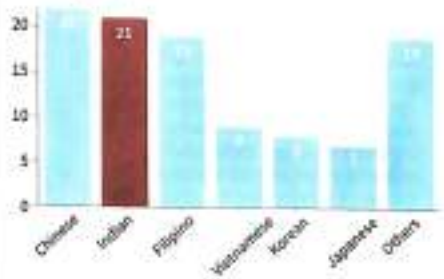
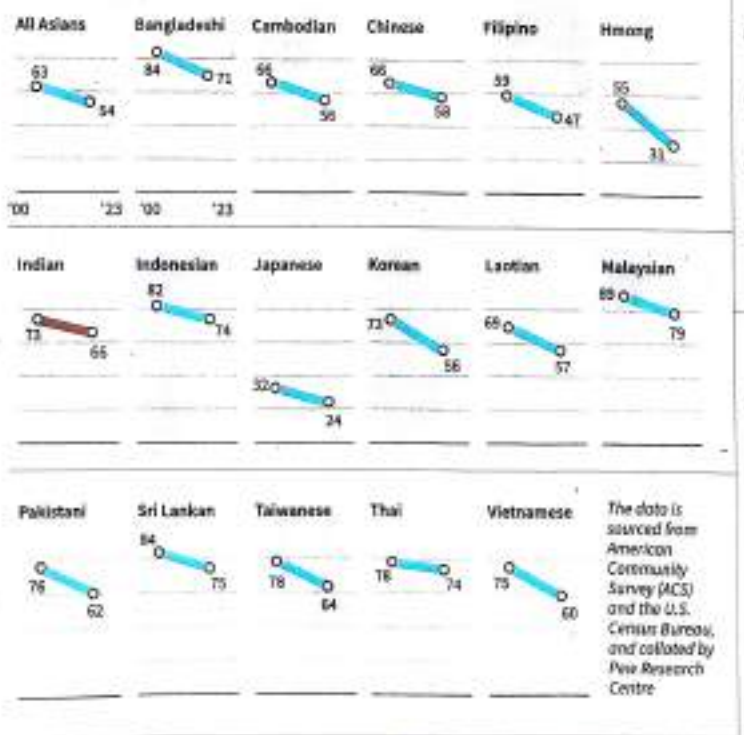


Chart 4: The chart shows the share of immigrants across various Asian origin groups in the U.S. Figures in %



The data is sourced from American Community Survey (ACS) and the U.S. Census Bureau, and collated by Pew Research Centre

Chart 5: The chart shows the share of Asian Americans with a bachelor's degree or higher. Figures in %

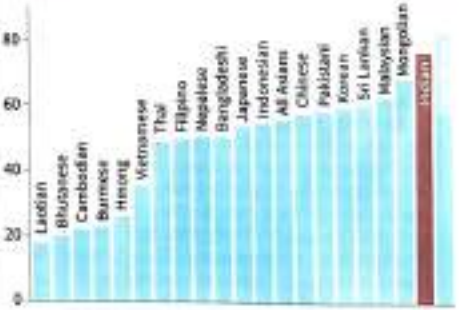
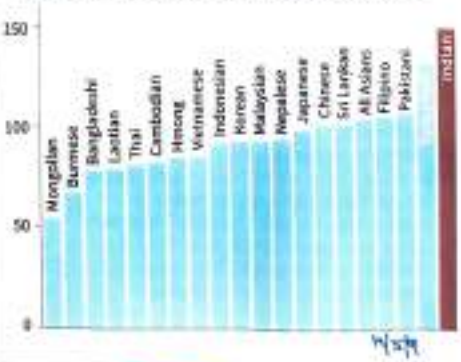


Chart 6: The chart shows the median income of Asian headed households across origin groups in 2023. Figures in $1,000s



INDIAN EXPRESS, (P-14), 05 MAY 2025

What made US science great

That ecosystem is under threat. There is a lesson and opportunity for other nations

HEMANT KANAKIA AND SONALDE DESAI

WHAT DO LASERS, the internet, Google's search algorithm, the gene-editing tool CRISPR-9, Wireless MIMO (multiple-input multiple-output) technology, and Covid vaccines have in common? Key innovations underlying each originated in an American university, where government grants funded initial research and were later adapted for industrial research and development. Many great American multinational companies have emerged from these foundational research breakthroughs. However, if President Donald Trump has his way, America's golden age of creativity would soon be a distant memory. While the world is focused on the economic disruption caused by Trump's tariffs, his short-sightedness in killing the golden goose that made the American economy soar will have longer-lasting effects. Nevertheless, there are lessons for other countries, particularly India, as the American innovation system begins to unravel.

Assaults on universities and the feeding of anti-migrant hysteria undermine the fundamental framework on which America's technology-driven economy rests. The American innovation-industrial complex relies on three pillars: Stable support for research infrastructure within universities and non-profit institutions funded by the government, while allowing them to operate independently; an open and competitive ideas marketplace; and tapping into global talent. All three are currently under threat.

The Trump administration views universities as free riders exploiting government largesse by collecting 30 cents in overhead for each dollar going directly to support research. This is contrary to the post-war grand bargain created under the leadership of Vannevar Bush, the first presidential scientific adviser, whereby universities were supposed to nurture scientific talent through stable provision of jobs, laboratory space, research infrastructure, including libraries, and provide seed funding for new projects. The government would support this through overhead payments on grants. Curtailing overheads to 15 per cent jeopardises this equation.

Assaults on universities and the feeding of anti-migrant hysteria undermine the fundamental framework on which America's technology-driven economy rests. The American innovation-industrial complex relies on three pillars: Stable support for research infrastructure within universities and non-profit institutions funded by the government, while allowing them to operate independently; an open and competitive ideas marketplace; and tapping into global talent. All three are currently under threat.

The second pillar of this troika balanced creative freedom with accountability through professional oversight. An elaborate infrastructure was put in place in institutions like the National Institutes of Health to ensure that lack of fame or connections did not hold back young researchers, and peer review by other scientists was the only criterion that grant proposals needed to satisfy. The Center for Scientific Research at NIH was always conscious of the tendency of scientific orthodoxy to dominate and suffocate innovation. It looked for ways to ensure an even playing field. The latest balloon from the administration to downplay the role of scientific review and withholding funds from research powerhouses Harvard and Johns Hopkins to ensure political compliance risks destabilising this hard-won independence. If America forgets that, when ideology or cronyism trumps fair competition, it stifles a vibrant scientific culture. It only has to look at Russia. Russian scientists did not receive a single Nobel Prize for science between 2011 and 2022, during which 61 Americans became Nobel Laureates in scientific disciplines.

Beginning with a flight of Jewish scientists from Germany, American science has benefited tremendously from the influx of international scholars. Of the 314 laureates who won their Nobel Prize while working in the USA, 102 (or 30 per cent) were foreign-born. Compare that to Japan, which counts no foreign-born individuals among its nine Nobel laureates. We would be hard-pressed to find any scientific discipline whose leadership does not include people born outside of the United States. The anti-immigrant sentiment fuelled by the current administration will make America a less attractive place for international students and researchers. The administration claims not to be against international students, but they are welcome only if they hold no political views. This is reminiscent of Great Britain, which until 1829 was more than willing to extend democratic privileges to Irishmen as long as they did not profess Catholic beliefs.

Ironically, attempts to make America great again seem to think that destroying the institutions that made American science great is the best place to begin. These draconian measures have their roots in a belief that American universities are home to a woke culture that must be rooted out by any means. Ostensibly, this is to prevent activism around Gaza to prevent antisemitism. However, using the cudgel of financial and administrative power to humble universities that have taken pride in self-governance and openness to diverse viewpoints does not simply curb political dissent; it risks damming the fountain of their creativity. The only two-time unshared Nobel Prize winner, Linus Pauling's life, offers an interesting example. Pauling received a prize in Chemistry as well as the Peace Prize for his crusade against nuclear weapons, a crusade that came under scrutiny from Senator McCarthy and led to tensions with his home institution, the California Institute of Technology. These tensions led to his leaving CalTech, and as historian of science Jeffrey Kovac notes, stunted the productivity of his later years. Unfortunately, the costs of the road not taken are rarely visible, except through the eyes of history.

There is a lesson and an opportunity for nations that seek to compete with America by enhancing their scientific infrastructure. The lesson lies in heightened appreciation of what made the American innovation economy function — institutional structures that provide support without stifling creativity and innovation, not using political ideologies to guide funding or regulations. Opportunity lies in a vacuum that is likely to be created and spaces that can be filled by less dogmatic nations in fields like climate science and vaccine technologies. As India seeks to enhance its innovation ecosystem, it is worthwhile to pay attention to opportunities and lessons from the self-inflicted wounds on American science.

Kanakia is the founding president of Maker Bhavan Foundation, and Desai is professor and centre director at NCAER National Data Innovation Centre. Views are personal

5/5/25

TRIBUNE, (P- 6), 05 MAY 2025

Death before exam

Toppers' culture needs a hard reset

THE tragic deaths of three young students — two NEET aspirants in Kota, Rajasthan, and a forensic science student of a private university in Mohali, Punjab — within days of each other lay bare a systemic failure that India continues to ignore at its own peril. That one of the students died just before the NEET-UG exam underscores how relentless academic pressure, mental health neglect and unrealistic expectations have created a lethal mix for many. Kota, the coaching hub, has seen 14 student suicides this year alone. Despite repeated warnings, the structural stressors — high-stakes exams, toxic competition, unregulated coaching practices and the burden of 'guaranteed success' — remain unaddressed.

Recently, the Central Consumer Protection Authority (CCPA) issued notices to several coaching institutes for misleading advertisements and unfair trade practices. Many ads promised top ranks and assured selections without substantiating their claims. These promises, coupled with immense pressure, are often a trap for vulnerable students and anxious parents. The country's toppers' culture needs a hard reset. The Rajasthan government's proposal for the Coaching Institutes (Control and Regulation) Bill is a step forward. Mandatory counselling and aptitude tests before enrolment may help, but enforcement is the key. The 2018 guidelines that aimed to provide psychological support and regulate private institutes seem to have been ignored into irrelevance. Without strict oversight, the new law too risks becoming symbolic.

Parents must also introspect. Forcing children into ill-suited streams or tying self-worth to marks and rankings breeds despair. The country must stop treating its students as rank-seekers and start recognising them as individuals with unique strengths and limits. The government must cultivate an ecosystem that generates enough jobs for the youth with varied streams of interest. No exam is worth a life.

DECCAN HERALD (P-6), 06 MAY 2025

KREIS schools: A model to emulate

The recently announced SSLC results have thrown light on a remarkable yet often overlooked story – that of the Karnataka Residential Educational Institutions Society (KREIS). While the overall SSLC pass percentage in the state rose to 62.34% – a 9% improvement from last year– KREIS schools have soared far beyond, achieving an exceptional 91% pass rate. This is not just a statistical achievement, it is a demonstration of what can be achieved when government officers are committed and systems are managed with purpose. KREIS, which currently runs 821 schools under the Department of Social Welfare, educates over two lakh students, from the most marginalised communities, including those from nomadic tribes, families of sanitation workers, former Devadasis, rescued bonded labourers, and other underprivileged backgrounds. Many are first-generation learners and despite significant hurdles, they have secured 34.10% distinctions and 55.90% first-class results. With the average scores increasing from 72% last year to 78% this year, the institutions even bagged 71 ranks, including the prestigious third rank statewide.

This success is a testament to the commitment of teachers and administrators. Their collective leadership demonstrates that with focussed governance, even the most underprivileged students can achieve excellence when provided with the right support and direction. However, this achievement also raises an urgent question: If such excellence can be achieved by KREIS schools serving some of the most disadvantaged children, why do regular government schools still linger at a 63% pass rate?

Excellent SSLC results show how committed, continued support enables even the most marginalised

The key differentiator appears to be the comprehensive support system inherent in the KREIS model. These fully residential institutions provide students with everything they need, from basic needs like toothbrushes to essential learning material like textbooks, all free of cost. This holistic approach allows students from Grades 6 to 12 to concentrate solely on their education in an environment that nurtures both academic growth and a strong sense of self-worth. Karnataka should build on this success and expand KREIS schools by leveraging corporate social responsibility (CSR) initiatives to bring much-needed funding into infrastructure, technology, and student welfare. When students from oppressed communities are provided such all-around support, they not only excel academically but also develop the confidence to aim higher in their career paths. The government should continue to empower committed leadership, scale this successful model, and ensure every child in Karnataka has access to quality education. KREIS has shown us what is possible. Other states should take note, while Karnataka should ensure that this shining example becomes a norm, not an exception.

INDIAN EXPRESS, (P-11), 06 MAY 2025

The room he couldn't leave

At IITs, we train students in quantum physics — but not how to ask, 'Are you ok?'

PARTHA SINHA

THERE'S A KIND of silence that hostel rooms never forget. It settles in long after the noise fades. After the roommate goes home for a long weekend. After the last WhatsApp ping. After the mess plate goes untouched. It stays. It thickens. And sometimes, it wins.

A 22-year-old boy died by suicide in MMM Hall, IIT Kharagpur. That sentence should be enough to halt the nation. But it won't. We'll glance at the headline, mumble something about pressure, and scroll on. The nation has built up calluses where its conscience should be. I'm an alumnus of the same IIT and lived in Patel Hall. I know those corridors. I know the loneliness that blooms at 2:00 am like mould on ambition. I know the sound of a ceiling fan that suddenly feels too loud. I know how it feels to walk among 9-pointers and feel like a typo in your own story.

The real tragedy? Not that it happened. But that we have a protocol for it now. A student dies. A committee is formed. A condolence email is drafted. A professor says, "He never came to us." The counselling centre updates its hours. The rest of us move on — with the muscle memory of institutional apathy. Let's stop pretending this is rare. It isn't. What's rare is the boy who did ask for help — and didn't get branded as "too sensitive".

The IITs, for all their glory, are emotional deserts dressed up as intellectual oases. We teach calculus, machine learning, quantum physics — but not how to ask, "Are you okay?" Not how to answer it either. You arrive from your hometown — maybe Patna, maybe Coimbatore — where you were your family's pride, your coaching centre's poster boy. You step into a room the size of your father's pantry and are handed the keys to your future. But no one gives you the manual for solitude.

We assume these kids — yes, kids — are equipped. But high IQ is not high EQ. You don't solve grief with logic. You can't debug despair. And heaven forbid you show signs of struggle. Because in our culture, vulnerability is a design flaw. Admitting to mental distress is like confessing you're not built for greatness. And greatness, we're told, is what your parents mortgaged their dreams for. So we build boys who can write code at 3:00 am but can't say, "I'm afraid". We build girls who can lead clubs but can't admit they feel lost. We raise a generation of high performers and low talkers — fluent in C++, tongue-tied in therapy.

And society watches approvingly, confusing repression for resilience. Ask someone why they didn't seek help, and you'll hear it in a hundred versions: What will people say? They'll think I'm weak. I'll be the one they whisper about in the mess line. Because in India, mental health is a family scandal. Not a fact of life.

And now? Now there's a room in MMM Hall that won't be reassigned for a while. A bed that won't be remade. A mother who will stare at a phone that no longer rings. A WhatsApp status that will remain "online" long after the boy behind it is gone. This isn't a tragedy. It's a verdict. On us. On every warden who thought silence meant strength. On every peer group that didn't notice a boy disappearing in plain sight. On every institution that taught differential equations but never emotional ones.

And if your throat tightens as you read this — let it. That's not discomfort. That's delayed grief. Because he didn't fail us. We failed him. And the silence that took him is still out there — quiet, patient, and undefeated. Maybe lurking behind codes and caffeine.

The writer is an advisory professional and an alumnus of IIT Kharagpur

MILLENNIUM POST (P-7), 06 MAY 2025

ILLICIT THREATS

Wellspring of Ingenuity

India's intellectual property ecosystem is undergoing a transformative leap, as evident in its record patent filings, institutional reforms, freely breathing innovation, and IP-conscious innovators

ANIL RAJPUT

THE WRITER IS CHAIRMAN, IPR COUNCIL, FICCI

Safeguarding the innovators who are behind the ideas is as crucial as encouraging innovation itself

World Intellectual Property Day, celebrated on April 26 every year, calls for reflection on how far a country has progressed in cherishing and protecting the ideas that define its future. Originally commemorated in 2000 by the World Intellectual Property Organisation on the occasion of the enforcement of the WIPO Convention in 1970, it is now an international reminder that creativity, innovation, and invention are the building blocks of progress. India's journey over the last half decade has been nothing short of transformative in this arena. During this period, the nation has transformed from an emerging voice in the IP conversation to one of the world's most vibrant ecosystems for intellectual property.

Patent applications in India have risen exponentially, with recent years registering double-digit growth consistently. Alone in 2023, India saw the most rapid growth in patent applications among the global leading economies, with resident inventors for the first time contributing to over half of the total filings. The size and speed of grants also reached new heights, witnessing a sharp increase in both productivity and innovation quality. More than 1,00,000 patents were issued in the previous fiscal year—an average of almost 250 grants per working day—demonstrating that innovation is not only happening but being recognised and protected at speed.

This speed is not limited to one sector or geography. Startups, MSMEs, universities, and large corporations alike have become engaged actors in the IP ecosystem. Patent applications by startups alone have increased over threefold in the past six years, thanks to the ease of filing processes and financial rewards. From Bengaluru's biotech companies to Pune's deep-tech startups and Gujarat's solar tech labs, innovation has found deep roots in regions and industries. Education establishments also have adopted IP as a central strategy; thousands of filings are now coming out of Indian campuses every year, reflecting a change in generation in terms of awareness and ambition.

Sectorally, the transition has been broad and strategic. In Pharma, India has moved away from its traditional position as a world provider of generics to now heavily investing in drug discovery, biotechnology, and medical device patents. The pharmaceutical sector, worth nearly USD 58 billion, can grow to USD 120–130 billion in 2030 and USD 400–450 billion in 2047. The post-pandemic times particularly witnessed the scientific community of India react through indigenous vaccines and diagnostics, reviving international trust in Indian ingenuity. The application of geographical indications (GIs) as a means to safeguard regional goods has grown manifold in agriculture, benefiting not only products but a whole community of farmers and craftspeople. Up to 2023, India had registered 530 GIs, with Uttar Pradesh having the most at 74 and Tamil Nadu coming second at 59. In technology, India is also a serious contender in digital innovation, with patent applications in artificial intelligence (AI) going up by 25 per cent between 2022 and 2023, and AI-related patent applications rising more than six times over the last five years. The pace at which India is closing the gap on next-generation technology filings is reflective not just of an ability to innovate, but of the boldness to challenge the world.

Intellectual property has been front and centre for the Indian government's innovation priorities

This sudden surge in filings and grants has been facilitated through focused reforms as well as the strengthening of institutions. Intellectual property has been front and centre for the Indian government's innovation priorities. IP offices have been modernised to entirely digitised processes, with 95 per cent of records being digitised by 2023, along with lower turnaround times, and much greater efficiency in patent examination and trademark processing. Recruitment of skilled examiners and the inclusion of AI tools in administrative processes has made operations faster and more transparent, thus building more trust in the system.

Financing support to innovators has also received unparalleled attention. Startups, MSMEs, and solo inventors are now favoured by significant fee rebates and free consulting services. Academic and research institutions have been incentivised through reimbursement of patent fees and commercialisation promotion. IP literacy, which was an esoteric topic, is now being addressed at scale through national awareness missions. Over 9,000 awareness programmes have been organised by the National Intellectual Property Awareness Mission (NIPAM), and these have reached about 2.34 million people, including 2.14 million students and 235,000 teachers in all 28 states and 8 Union Territories.

On the enforcement side, vigorous legal and administrative actions have been undertaken to strengthen compliance and check infringement. The recent changes in important legislation have added tougher sanctions and criminalisation of piracy, counterfeiting, and use of copyrighted works without consent. Special IP cells and commercial courts are now more capable of dealing with complex cases, and collaboration with industry organisations has ensured that IP enforcement goes beyond litigation to include prevention, surveillance, and education. These trends have established credibility and sent a message to investors and international partners that India is committed to protecting innovation.

India's relative performance is also instructive. As the patent ecosystem in most advanced economies is developing more slowly, India's exponential growth in filings and grants is making it an emerging leader. In digital innovation, especially, India's sheer number of patents in emerging technologies is creating benchmarks not only regionally but internationally. The nation has risen quickly in global innovation rankings and keeps on rising because of its enhanced research output, commercialisation frameworks, and policy environment.

But underneath the statistics is the true narrative—of a country that's coming to appreciate intellectual property as more than a legal concept, not just as an economic and cultural power. Of a society where a student from Lucknow, an entrepreneur in Coimbatore, or a biotechnology scientist in Hyderabad all appreciate how to safeguard what they have conceived. Of a nation where defending an idea is no longer looked at as an elite right, but as something fundamental.

As India is poised to become a global innovation hub, it is essential to understand that innovation is the lifeblood of its development strategy. Safeguarding the innovators who are behind the ideas is as crucial as encouraging innovation itself. In an era where brilliant ideas can be copied and stolen in a matter of seconds, making sure that creators are safeguarded is not just a legal requirement but a moral and economic imperative. When a protection does not exist for an innovation, lost is not only revenue—lost is trust, opportunity, and potential built for a future on that basis.

India's intellectual property narrative is still unfolding. The last half decade has proven what can happen when a nation invests in its thinkers, builders, and creators. The future will establish how this traction is maintained, augmented, and channelled into enduring world leadership. The mission remains unhushed—to retain, safeguard, and advance the whole canvas of intellectual property to the extent it builds a secure, self-dependent, and well-regarded world Bharat.

Views expressed are personal

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Ensuring quality in online vocational education

To truly empower its youth and close the skills — employability gap, India must urgently address issues of quality assurance, accreditation and equitable access — laying the groundwork for a skilled, future-ready workforce

FIRST Column

India's ambitious goal of establishing itself as a global knowledge economy is contingent upon the successful integration of vocational education into its mainstream educational framework. A crucial determinant of this success is the capacity to equip the workforce with job-ready skills through effective vocational training.

The National Education Policy (NEP) 2020 clearly states the objective of exposing at least 50 per cent of learners to vocational education by 2025. While online learning platforms have revolutionised the delivery of vocational skills, the unchecked expansion of these programmes has raised serious concerns about quality, credibility, and industry relevance. Without the implementation of robust quality assurance and accreditation mechanisms, the promise of enhanced employability through online vocational education will certainly fall short.

The online education market in India is booming, projected to reach a staggering $11 billion by 2026. Government — led initiatives like 'SWAYAM' have successfully enrolled over 12 million learners in diverse fields, and the launch of the National Digital University in 2023 underscores India's unwavering commitment to digital learning. However, accessibility is a significant barrier that cannot be overlooked. The Comprehensive Annual Modular Survey (CAMS) 2022–23 conducted by the National Sample Survey Office (NSSO) reveals a stark reality: only 4.2 per cent of rural households own a computer, compared to 21.6 per cent in urban areas. Similarly, a mere 24 per cent of rural households have internet access, in contrast to 66 per cent in urban regions.

This glaring digital divide unequivocally undermines the democratisation of vocational education, excluding a vast segment of rural and marginalised youth — precisely those who would benefit most from skill enhancement programmes. Furthermore, the inconsistency in the quality of online vocational content, ranging from world-class professional certifications to outdated and inferior courses, only exacerbates the skills gap rather than closing it. The digital revolution has fundamentally transformed access to vocational education. Initiatives like SWAYAM have successfully facilitated over 12 million student enrolments across various courses, while the establishment of the National Digital University in 2022 signals a bold commitment to expanding digital learning opportunities.

The NEP 2020 firmly advocates for a holistic integration of vocational education, highlighting the critical need for flexibility through multiple entry and exit points. It is essential to align curricula with the National Skills Qualifications Framework (NSQF) to ensure that vocational qualifications are standardised and recognised nationally. This standardisation is vital for facilitating learner mobility and progression. The National Skill Development Corporation (NSDC) plays an indispensable role in advancing skill development through its public-private partnership model. With over 5.2 million students trained and partnerships with more than 235 private sector organisations, NSDC's initiatives, such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY), have dramatically improved skills across the country. However, it is imperative to recognise that most existing frameworks were designed for offline, centre-based training. Adapting these for online-only or hybrid models requires bold reimagination rather than simple replication. Accreditation is a non-negotiable quality assurance mechanism that guarantees vocational programmes meet established standards.

While the NSQF provides a solid foundation for competency — based certification, the current educational ecosystem lacks a dedicated regulatory framework for online vocational programmes. Regulatory bodies like the National Council for Vocational Education and Training (NCVET) and the All India Council for Technical Education (AICTE) must rapidly evolve protocols tailored specifically for MOOCs, hybrid apprenticeships, simulation labs, and skill development powered by virtual reality (VR) and augmented reality (AR). Additionally, the rise of micro-credentials, short-term, skill-specific certifications — underscores the urgent need for India to integrate these within formal educational frameworks.

THE COMPREHENSIVE ANNUAL MODULAR SURVEY (CAMS) 2022–23 CONDUCTED BY THE NATIONAL SAMPLE SURVEY OFFICE (NSSO) REVEALS A STARK REALITY: ONLY 4.2 PER CENT OF RURAL HOUSEHOLDS OWN A COMPUTER, COMPARED TO 21.6 PER CENT IN URBAN AREAS. SIMILARLY, A MERE 24 PER CENT OF RURAL HOUSEHOLDS HAVE INTERNET ACCESS, IN CONTRAST TO 66 PER CENT IN URBAN REGIONS

This integration will enable learners to stack micro-credentials towards full qualifications that are recognised by employers. Without credible accreditation, we face significant risks: learners may waste time and resources on "certificate mills" without improving their employability, while employers may rightfully lose trust in online certifications, perpetuating biases against non-traditional pathways. We must act decisively to address these challenges.

Enhancing Employability

The true measure of any vocational programme is its job outcomes. In India, we face a significant paradox: despite an alarmingly high unemployment rate of 18.4 per cent among educated youth, industries are desperately seeking skilled talent. To effectively tackle this issue, NEP 2020 underscores the critical need for robust industry — academia partnerships. Initiatives such as mandatory internships, apprenticeship-embedded degrees, and industry-co-designed curricula are not just beneficial — they are essential. Online vocational platforms must go beyond theoretical knowledge and provide hands-on exposure through virtual labs, live projects, remote internships, and industry-sponsored challenges and hackathons. Moreover, the lack of soft skills such as communication, teamwork, and problem solving — often plagues online programmes. It is imperative to embed these skills into the curriculum to ensure graduates are fully prepared for the demands of the workplace.

Additionally, we must integrate vocational education into mainstream education to destigmatise skill-based learning and promote it as a respected and viable career option. Establishing a dedicated body to oversee the accreditation of online vocational programmes is vital to ensuring they meet high-quality standards and align with industry requirements. The time for action is now — we must prioritise and strengthen vocational education to enhance employability.

Technology for Quality Assurance

Utilise advanced analytics and AI-driven tools to monitor and enhance the effectiveness of online vocational training. Promote public — private partnerships and encourage collaborations between educational institutions, industry stakeholders and Government bodies to co-create curricula and provide real-world training opportunities.

Invest in digital infrastructure, particularly in rural areas, to ensure equitable access to online vocational education. Regularly update course content to reflect the latest industry trends and technological advancements. Ensuring the quality and accreditation of online vocational programmes is pivotal for India's socio-economic development. By aligning educational initiatives with industry needs and leveraging technology, India can equip its youth with the skills necessary for the future workforce. A concerted effort involving policymakers, educators, industry leaders, and the community is essential to realise this vision.

As India aspires to become a global skill capital, ensuring online vocational education's quality, relevance, and credibility is no longer optional but a national necessity. The stakes are immense: empowering millions of youth with the skills to thrive in a dynamic global economy, driving economic growth, and advancing social mobility. This transformation requires bold policy innovation, rigorous accreditation, technological leverage, and relentless industry collaboration. Only then can online vocational programmes fulfil their promise, not just as a bridge to employment but as a foundation for India's future prosperity.

(The writer is a [illegible] Training Partner with the National Skill Development Corporation (NSDC), and a [illegible]; views are personal)

STATESMAN (P-11), 06 MAY 2025

How e-learning is enhancing peer-to-peer experience

RAMYA CHATTERJEE

With continuous digitalisation, education is being transformed in profound ways, and the emergence of e-learning is arguably the most transformative of those forces, spreading knowledge like never before. The technological advancement and wide reach of the internet have contributed to unprecedented levels of online learning expansion, as shown by recent global figures: an estimated 5.56 billion internet users as of February 2025. In today's world, e-learning platforms have evolved into intricate ecosystems that promote dynamic and interactive peer-to-peer learning, facilitating collaboration among individuals and significantly enhancing the overall learning experience. One of the biggest alluring factors of e-learning is its flexibility, allowing people to study from anywhere and at any time that suits them. Furthermore, the emergence of advanced digital tools has expanded opportunities for connecting learners and fostering a more robust sense of community. This is increasingly relevant in the manufacturing industry, where continuous learning and adaptation are crucial.

Eliminating geographical limitations

One of the key methods by which e-learning achieves this objective is by breaking down geographical limitations. The internet is one of the great equalisers, joining together learners from different parts of the world. The global classroom enhances the exchange of ideas and helps students appreciate different cultures, perspectives, and ways of solving problems. In this context, collaborative suites and advanced video conferencing technologies have become crucial as learners anywhere in India and far-off international cities collaborate, brainstorm, and learn from each other as though they are in the same room. The enhancement of learning in this manner is helpful not just to the learners but also equips them to function more effectively in today's global and interdependent workplace. This is particularly important in the manufacturing industry, which often involves international supply chains and collaborations.

Fostering engaging conversations through forums

Discussion forums play an extremely important role in creating engaging and informative interactions among peers in online learning settings. These platforms help learners digest course material, share insightful thoughts, and engage in meaningful conversations with fellow students. As opposed to regular discussions that are usually limited by time, these forums give students the chance to develop intricate ideas and share them with their peers. Instructors play a crucial role in encouraging these discussions by posing challenging questions and providing feedback that pushes students to deepen their conversations. Such forums can turn out to be beneficial for professionals in the manufacturing sector to collaboratively share best practices and solve problems together.

Boosting communication with video conferencing tools

Moreover, the incorporation of communication technologies into the current e-learning landscape marks a significant leap forward. Video conferencing, featuring options such as virtual breakout rooms, facilitates real-time face-to-face interactions. This capability nurtures a sense of community, which allows learners to pose questions and engage in collaborative brainstorming sessions. Students can also engage in informal chats and utilise instant messaging for casual exchanges, thereby offering mutual support and maintaining communication akin to that found in a traditional classroom setting. These tools enable effective communication and knowledge sharing among teams in the manufacturing industry, regardless of their physical location.

The importance of collaborative digital tools

Collaborative digital tools have elevated peer-to-peer interactions to a new dimension. Platforms for shared documents and interactive online whiteboards function as virtual classrooms, enabling students from various locations to co-create content, provide immediate feedback, and collaboratively resolve challenges. These tools promote overall teamwork, effective communication, and a shared sense of accountability for learning outcomes. By contributing to a collective digital workspace or document, learners can actively engage and freely share their ideas. The application of such tools is becoming increasingly vital in the manufacturing industry for project collaboration, design reviews, and process improvement initiatives.

Connecting learners beyond the classroom

The emergence of social learning systems that can exist independently or as part of e-learning systems has greatly impacted learner-to-learner interactions. Such systems usually combine user accounts with an activity feed and group areas, which allows for easy interaction among students based on topics, courses, or any educational objectives. The emergence of peer review and comment functionalities enhances the collaborative nature of this ecosystem as students obtain valuable feedback and learn to appreciate constructive criticism from their classmates.

Using online materials for collaboration improvement

The components of online resources foster effectiveness in inter-student engagements in an e-learning setting. Students are not limited to sharing text documents but can also exchange video files and other learning aids, which enhances understanding of various concepts and issues. The ongoing nature of the online forums and shared documents ensures that learning and the reinforcement of important ideas are done frequently. To put it all in a nutshell, the changes in technology and the universal acceptance of the internet have turned e-learning into an important platform that facilitates interaction among learners. Using a wide range of communication and collaboration features, online learning systems are overcoming claim boundaries, encouraging active participation in discussions, organising group work, and building a community of learners. If designed and managed well by the teachers, the contribution of learners to the learning processes through e-learning increases the learning experience and develops the essential teamwork ability needed in the complex digital world.

The writer is Chief of Solitare Grand Business and CEO and Director of Pointer Global Innovations

STATESMAN (P-11), 06 MAY 2025

Rethinking education with design

ROUHAN CHATTERJEE

On 2 May, the city saw a fresh wave of educational innovation with DesignEdX, a half-day conclave hosted by Anant National University. Organised by the University's Centre of Design Education (CODE), the workshop aimed to reshape the future of education through design thinking. 45 educators, thought leaders and changemakers from 35 prominent schools in and around Kolkata participated in the insightful event.

Themed 'Design Thinking in Education: Transforming Challenges into Opportunities', the conclave provided a platform to explore how design thinking principles can be used to transform classroom challenges into innovative and interdisciplinary solutions. Notable schools attended the session including Lakshmipat Singhania Academy International, Shri Shikshayatan School, Modern High School International, The Heritage School, R P Goenka International School and Sushila Birla Girls School, among others.

Setting a thoughtful tone, the conclave commenced with an address by Anuraya Chaubey, Provost, Anant National University who emphasised the innovative and sustainable methods to integrate design thinking into the educational framework. It also featured a panel discussion on incorporating Indigenous knowledge systems in today's education landscape. Speaking to The Statesman, Anuraya Chaubey said, "Through CODE, we are trying to create a paradigm of education that is not only oriented towards finding jobs but also focuses on helping students use their learning to solve problems. Design thinking is a kind of thinking that is tailored to leveraging creativity and critical thinking, so that students understand the world we live in, identify its problems and solve the issues. It helps you to design and craft solutions, and is a very specific approach towards problem solving".

Chaubey further pointed out that children are naturally curious and are not afraid of failing before entering school. However, our education system and rote learning methods suppress these virtues and make them another rat in the race. "CODE attempts to connect with the students at a young age as well as schools, teachers and parents to reimagine what real education should be and train them to deal with the changing circumstances," he added.

This was followed by a hands-on workshop where principals and educators were divided into groups and asked to take a simple object- like a pencil, wheel, leaf or banana- and write down the different perspectives that come to mind when thinking about it. After writing, they presented their diverse viewpoints on the object. This exercise aimed at stimulating classroom-level problem-solving using design methodologies. "Students are mostly connected with teachers. Through this exposure, teachers would learn the necessity of design thinking and will be able to make students understand its significance," Chaubey stated.

The session left a deep impact on the participating educators. "I've been in the field of education for almost 33 years now and this was a fabulous experience. I didn't expect a workshop where we would be made to think like a school child. To have chart paper, sketch pens, and colour pencils to design a flowchart and to think literally, was something really unique. This was not one-sided. This kind of experiential learning needs to be replaced with rote learning in our classroom," Indira Bhattacharya, Cluster Principal, Narayana Group of Schools, told The Statesman, adding, "We looked into the different facets of everyday objects. This is what true learning should be - comprehensive, collaborative and beyond the boundary of a particular subject. Such workshops are ideal and create a learning environment that is deeply engaging."

Another teacher, Payal Ramparia, PGT and HOD, Shri Shikshayatan School, echoed similar sentiments. "Today's session was different and a lot more engaging. As a teacher, we are already incorporating elements of design thinking but were unaware of it. The workshop helped connect the dots. Traditional learning makes education dull for students, but if we embed design thinking into our pedagogy, it becomes creative and meaningful." She also appreciated the practical exposure offered at the workshop. "You can't teach unless and until you've experienced it. By inviting schools to participate in hands-on activities, they allowed us to internalise the learning. Now we can go back and pass it on to our students in a more effective way."

With events like DesignEdX, Anant National University is spearheading a movement to shift education from rote to relevance, ensuring that students are not just prepared for exams - but for life.

ASSAM TRIBUNE (P-6), 07 MAY 2025

NEET and use of technology

SUBIMAL BHATTACHARJEE

Technology-backed reforms and robust protocols are vital to restoring trust and ensuring integrity in India's examination ecosystem.

On May 4, 2025, the National Testing Agency (NTA) conducted the National Eligibility cum Entrance Test (NEET) UG 2025 across 552 centres in India and 14 centres abroad. This crucial common entrance examination for undergraduate medical programmes comes in the wake of significant controversies surrounding last year's tests. The May 2024 NEET faced serious allegations of irregularities, including discretionary grace marking, cheating, and impersonation. Similarly, the UGC National Eligibility Test (NET) of June 2024 – which qualifies candidates for assistant professorships, junior research fellowships, and PhD admissions – was cancelled a day after its administration when reports emerged of question papers being leaked and sold on the dark web.

These incidents, affecting lakhs of aspiring candidates, have severely damaged trust in India's exam system. Despite its autonomous status in conducting entrance examinations for higher educational institutions, the NTA was under a cloud of suspicion, even after the Union government removed its director. As this involves the lives and careers of lakhs of candidates who work hard to clear the tough test, it becomes imperative to ensure foolproof integrity of the exam ecosystem.

In response to these challenges, the Centre appointed a seven-member committee of experts led by Dr K Radhakrishnan, former Chairman of ISRO and Chairman of the Board of Governors at IIT Kanpur. The committee was tasked with providing "recommendations on reform in the mechanism of the examination process, improvement in data security protocols, and structure and functioning of NTA." The committee submitted its report in November 2024 with the following key recommendations:

(i) Shifting to fully online exams where feasible, and implementing hybrid models combining digital question delivery with paper-based answer sheets; (ii) Adopting a two-stage exam process similar to JEE to better manage the large candidate pool and enable more comprehensive evaluation; (iii) Increasing permanent staff instead of relying primarily on temporary workers to improve exam management; (iv) Improving security protocols and expanding NTA's direct control over exam centres to reduce dependence on external facilities; (v) Implementing digital delivery of question papers closer to exam time to minimise security vulnerabilities; and (vi) Setting caps on the number of attempts per candidate to encourage serious preparation and maintain fairness.

Clearly, recourse to technology has always been a prudent move to not only optimise today's exam ecosystem but also ensure greater integrity. Since its establishment in 2017, the NTA has successfully conducted numerous exams, including the JEE and the Common Management Admission Test (CMAT), and has gradually introduced technology at various stages for the conduct of exams as well as for declaring results. While NEET UG has traditionally been administered as a single-sitting pen-and-paper exam in Optical Mark Recognition (OMR) format, the NET, which had been computer-based since 2018, reverted to the pen-and-paper OMR mode in 2024.

Overall, exams conducted by the NTA represent an improvement over previous systems, though challenges persist: technical glitches, limited exam windows, standardisation issues, and security concerns regarding the transportation and storage of exam materials.

Despite technological advances, paper leaks continue to occur, finding new channels through criminal syndicates operating on the dark web and encrypted social media platforms. While the dark web has been implicated in exam paper leaks, attributing blame solely to this medium oversimplifies the problem. The dark web merely facilitates the distribution of leaked information; it does not create the initial breach or the demand for leaked papers. Similarly, blaming the hacking of the NTA portal diverts attention from the underlying systemic issues.

The integration of technology has transformed physical exam centres by creating a robust blend of traditional supervision with digital efficiency:

Biometric authentication: These systems verify candidate identities with precision, eliminating impersonation while expediting entry processes.

Digital question paper delivery: Secure delivery to centre servers enables last-minute content updates and customised question sets.

Electronic surveillance: AI-powered monitoring supplements human invigilators, flagging suspicious behaviour and creating comprehensive audiovisual records.

Anti-cheating measures: Mobile signal jammers and RF detectors prevent digital cheating without disrupting essential centre operations.

Rapid result processing: OMR sheet scanning at centres enables preliminary result processing with digital backup for verification.

Centre management software: Streamlines attendance tracking, seating arrangements, and inventory control across venues.

Digital documentation: Creates audit trails that enhance transparency and accountability.

Despite operating in physical spaces, these interventions have significantly reduced logistical complexities, improved security, and enhanced examination integrity, while maintaining the traditional centre experience that many assessment boards prefer. Effectively combating leakages requires a comprehensive strategy. This must include strengthening anti-corruption measures, improving security protocols, reforming the education system to reduce exam pressure, and addressing socioeconomic disparities that fuel demand for unfair advantages.

Beyond the Radhakrishnan committee's recommendations, a multilayered approach incorporating cutting-edge technologies should also be explored:

Blockchain-based question banks: Implementing tamper-proof storage with auditable access trails.

Secure biometric authentication: Using fingerprint, facial recognition, and retinal scans with liveness detection to prevent spoofing.

Adaptive testing technology: Providing each candidate with unique question sets to reduce the risk of paper leaks.

Decentralised exam delivery: Utilising edge computing to reduce reliance on central servers and minimise vulnerability to cyberattacks.

AI-based answer validation: Deploying algorithms to detect patterns indicating cheating or collusion.

Blockchain-based result publication: Ensuring transparency and preventing unauthorised alterations.

Restoring faith in India's exam ecosystem is imperative. The appropriate application of technology, alongside robust protocols, will help rebuild this trust. The 2025 NEET has been conducted with greater diligence, with technology playing a crucial role in facilitating a more secure and transparent process. This time, the UIDAI successfully tested Aadhaar-based facial authentication technology at select NEET UG 2025 centres in New Delhi. This proof of concept was implemented in partnership with the National Informatics Centre (NIC) and NTA to evaluate the viability of advanced biometric verification for candidate identification. The initiative represents a significant advancement in examination security protocols for one of India's largest entrance tests. The technology was seamlessly integrated with NIC's digital systems and NTA's existing exam procedures, demonstrating potential for wider implementation to enhance identity verification processes across national competitive exams. As we move forward, the integration of advanced security measures and innovative methodologies will be essential to maintaining the integrity of India's educational assessment systems.

ECONOMICS TIMES (P-8), 07 MAY 2025

STEM the Mental Rot, Optimise Minds

In India, education is another name for competition. But the gap between demand and supply of seats in institutions, especially state-funded ones, is brutal. It gets wider at elite institutions like IITs, IIMs and NLUs. Even for those who survive the entrance ordeal, there's more to follow. Crushing academic pressure deepens under-confidence, mental health struggles and isolation, especially among students from disadvantaged backgrounds. Too many, unable to bear the weight, snap—many taking things to the limit and attempting/committing suicide. But much before this stage is reached, learning capacities take a beating because of debilitating performance anxiety.

Which is why steps like IIT-KGP's latest move to relax rules to balance academics and well-being, and BITS Pilani-Goa adding stress management to its syllabus, are welcome. These tragedies, as the Supreme Court said in March, underscore the urgent need for a more responsive system to address factors that push students towards mental stress reaching a breaking point. Calling it a 'suicide epidemic', the top court ordered the formation of a task force to tackle the campus mental health crisis. NCRB data show students made up 7.6% of total suicides in 2022, with 1.2% linked to career problems, and 1.2% to exam failure. Weak grievance redressal systems leave students vulnerable to academic harassment and discrimination, while many institutions lack urgent intervention mechanisms for those showing signs of distress.

Easing the rat race is an imperative. HEIs must rethink rigid evaluation systems and invest in building safer, more welcoming campuses. And this is not only about stemming self-harm. It is also about extracting the best out of able minds to optimise their talents.

Intellectual swadeshi

'An examination of Swadeshi era thought suggests a movement aimed not only at producing material objects, but also new knowledge. The swadeshi production of knowledge was internationalist in scope and in execution. As swadeshi activists were shutting down to British goods, they were commencing an unparalleled degree of intellectual commerce with the world outside the British world empire,' Prof Kris Manjapra highlighted, bringing knowledge and intellectual thought to the forefront of our understanding of the Swadeshi movement

In our globalised age when higher education is on a dangerously slippery slope with government high-handedness creating distress among teachers and students alike, when academic and creative freedom is up against walls of indifference and hate, it is heartening to hear Gurudev Rabindranath Tagore delivering his first lecture in English in Madras on 9 February 1919.

In 'The Centre of Indian Culture' lecture, he raised the question "what should be the ideal of education in India. Instead of holding my listeners' minds in suspense till the very end, let me briefly give the answer in the beginning... On each race is the duty laid to keep alight its own lamp of mind as its part in the illumination of the world. To break the lamp of any people is to deprive it of its rightful place in the world festival. He who has no light is unfortunate enough, but utterly miserable is he who, having it, has been deprived of it, or has forgotten all about it.

"India has proved that it has its own mind, which has deeply thought and felt and tried to solve according to its light the problems of existence. The education of India is to enable this mind of India to find out truth, to make this truth its own wherever found and to give expression to it in such a manner as only it can do. In order to carry this out, first of all the mind of India has to be concentrated and made conscious of itself and then only can it accept education from its teachers in a right spirit. Judge it by its own standard and make use of it by its own creative power... The next point is that, in education, the most important factor must be the inspiring atmosphere of creative activity. And therefore, the primary function of our University should be the constructive work of knowledge... Education can only become natural and wholesome when it is the direct fruit of a living and growing knowledge."

On 27 March 1919 Gurudev also delivered this lecture at the Empire Theatre, Calcutta.

"The Centre of Indian Culture' may be read as one of the finest expositions of Swadeshi intellectual thought, in fact, historians and scholars have underlined the 'internationalism' and the stupendous growth of projects where 'knowledge for nationalist ends' were evident. Moreover, the Swadeshi movement was spread in time across three decades, quite clearly from 1903 to the early 1930s and even beyond seeking to assert indigenous autonomy, social consciousness and cultural productivity at one level, directly challenging the British Empire. At another level, there were knowledge affiliations which went beyond the confines of geography, and this trajectory of intellectual thought gives the Swadeshi movement a place on the global map of international movements which have continued to impact generations of Indians not merely those living in Bengal.

When Kris Manjapra, now Stearns Trustee professor of history and global studies at Northeastern University, USA, was contributing an article to the Economic and Political Weekly (20 October 2012), he titled it as 'Knowledgeable Internationalism and the Swadeshi Movement, 1903-1921'.

The Harvard-educated professor, working at the intersection of global history and critical study of race and colonialism, looked at the Swadeshi movement as one where "productive nationalism emerged with the partition of Bengal, mooted in 1903 and executed in 1905." He explained that while the Swadeshi movement can be portrayed in terms of economic nationalism – with the boycott of British goods and new politics of local consumption setting the stage for the future – there has been greater thrust of cultural historians and anthropologists who studied the expressions of Swadeshi activism in terms of material culture – manual industries, styles of dress, and nationalist symbols of everyday comportment. Said Prof Manjapra, "a study of the dynamics of intellectual life in the swadeshi era complements these approaches."

"An examination of Swadeshi era thought suggests a movement aimed not only at producing material objects, but also new knowledge. The swadeshi production of knowledge was internationalist in scope and in execution. As swadeshi activists were shutting down to British goods, they were commencing an unparalleled degree of intellectual commerce with the world outside the British world empire," Prof Manjapra highlighted, bringing knowledge and intellectual thought to the forefront of our understanding of the Swadeshi movement.

In Tagore's 1919 lecture, where he articulated objectives for the university, he spoke about cultural autonomy and international cooperation in the intellectual realm in the same breath. Prof Manjapra hailed Gurudev's clarion call: "A truly national Indian university, should teach at the highest level using the Indian languages, and not English alone. It should foster Asian cultural and aesthetic standards. But it should also 'perfect irrigation of learning' based on international 'co-operation', since a river belonging to a country is not fed by its own waters alone".

Gurudev's intellectual internationalism was seen as 'constructive Swadeshi' by historians like Prof Sumit Sarkar whose pioneering work 'Swadeshi Movement 1903-1908' remains a benchmark study. An interesting side-story is developing here, as Prof Manjapra shared: PC Mahalanobis in the 1950s got the idea for his nationalist project of 'brain irrigation' from Tagore. He had served as Tagore's personal secretary in the 1920s, and worked as the first general secretary of the Visva Bharati University senate.

Quite clearly there is a 'Tagorean spirit of swadeshi internationalism' seen sweeping its way into the arts, humanities and the sciences. "The swadeshi impulse propelled dramatist Shahid Suhrawardy to Bolshevik Moscow in 1917, singer Dilip Roy and dancer Uday Shankar to Paris, and painter Nandalal Bose to Tokyo on foreign study tours and scholarly sojourns from the 1910s to the 1930s. And knowledgeable internationalism made itself known in perhaps its most visually gripping way through cinema. The 1930s films of the Bombay Talkies, a production house that developed out of Bengali and German collaboration, portrayed modern social dramas within village settings. Bombay Talkies became an institutional irrigator for the fledgling Bollywood film industry as the film house trained a set of important actors, set designers and technicians who went on to consolidate the genres of Bombay cinema in the 1950s. The producer and artistic director behind the production house was Himanshu Rai. Rai was trained at Tagore's Visva Bharati and spent decades abroad on world travel," is the breathless account in Prof Manjapra's article.

Intellectual swadeshi is also the domain where Satyajit Ray and his generation of film-makers of the 1950s can be mapped. "Ray's *Pather Panchali* (1955) roused adulation and controversy at home, while also winning prizes at Cannes, Venice, London, Berlin, San Francisco, Tokyo, and elsewhere. Ray, along with artists like Ramkinkar Baij and Benod Bihari Mukherji also came out of the Santiniketan school of Indian knowledgeable internationalism. The productiveness of intellectual swadeshi lay in the insistence that Indians were not only recipients of foreign knowledge, but also creators and authors of knowledge and art forms that carried global significance," is the critical point made by Prof Manjapra.

There is the model of scientific institutionalisation set by Asutosh Mukherjee, vice chancellor of Calcutta University during 1906-23 which played an equally significant role. Mukherjee insisted that Indians had to be producers of original scientific and humanistic knowledge both for national uplift and for heightened status within international communities of knowledge.

His internationalism was not just about getting know-how and technology from overseas, "but about creating the conditions at home that would allow Indians to make fundamental contributions to the world fund of knowledge."

It is no accident that the Asutoshian era of Calcutta University produced one Nobel Prize winner, CV Raman, for his work in spectroscopy, and two more internationally celebrated scientific researchers, Meghnad Saha with his ionisation equation and S N Bose with his quantum statistics. Not only did Mukherjee institutionalise a new kind of nationalist university from within the existing structure of Calcutta University, but he insisted that a nationalist university had to be primarily a research university – it had to cultivate original knowledge of international standing, and it had to enhance and channel the intellectual creativity of the Indian people."

Gurudev Tagore's 1919 lecture looks squarely at challenges of "bringing about of an intellectual unity in India... I am told, difficult to the verge of impossibility owing to the fact that India has so many different languages. But every people in the world, in order to attain its greatness, must solve some great problem for itself, or accept defeat and degradation. All our civilizations have been built upon the bedrock of difficulties. Those who have rivers for their water supply are to be envied, but those who have not must dig wells and find water from the difficult depth of their own soil... We must bravely accept the inconvenient fact of the diversity of our languages... India is not like any one of the great countries of Europe, which has its one language, but like Europe herself branching out into different peoples having different languages."

Gurudev and these avatars of intellectual Swadeshi are our heritage which can neither be ignored, belittled nor erased.

Light from the shadow: Why parents are hiring teachers to sit in class

Supriya.Sharma@timesofindia.com

As awareness of autism, ADHD and learning disorders grows, parents and schools turn to shadow teachers to bridge the gap in classrooms

A child enters a regular classroom but struggles to write or focus. Lessons that others grasp easily remain confusing. Parents, unaware of hidden challenges, urge her to work harder. It's not that she isn't trying — she simply can't explain her struggle. Anxiety mounts, often spilling over into aggression, tears, or meltdowns. Eventually the signs can no longer be ignored.

Parents consult a counsellor, the school is informed, and soon, a quiet addition joins the classroom: a shadow teacher — a trained professional who provides one-on-one support to children with learning differences within mainstream schools.

Growing Need For Classroom Support

"The number of children diagnosed with autism spectrum disorder (ASD) is rising, and most schoolteachers aren't equipped to handle them. That's where a shadow teacher steps in," explains Gopa Dalal, a Mumbai-based special educator who works with a primary school student in Breach Candy.

Before the pandemic, Gopa was a part-time therapist for autistic children while serving as a preschool vice-principal. Back then, she hadn't encountered the concept of a shadow teacher. But post-Covid, with growing awareness around mental health, early diagnoses of ASD and ADHD (Attention-deficit/hyperactivity disorder) became more common — and so did the demand for specialists who could quietly guide students through the school day.

Today, shadow teachers are often hired directly by parents, with schools offering their consent and support.

Parents Hire, Schools Consent

India's educational policies — from the Right of Children to Free and Compulsory Education Act, 2009 (RTE) to the Rights of Persons with Disabilities Act, 2016 and National Education Policy (NEP) 2020 — advocate for inclusive classrooms that cater to children of all abilities.

While elite private schools often have multidisciplinary Special Education Needs (SEN) sections with specialists among their staff, many private institutions lack the budget or personnel to offer such services. In these cases, when parents are willing to bring in shadow teachers, schools are happy to collaborate.

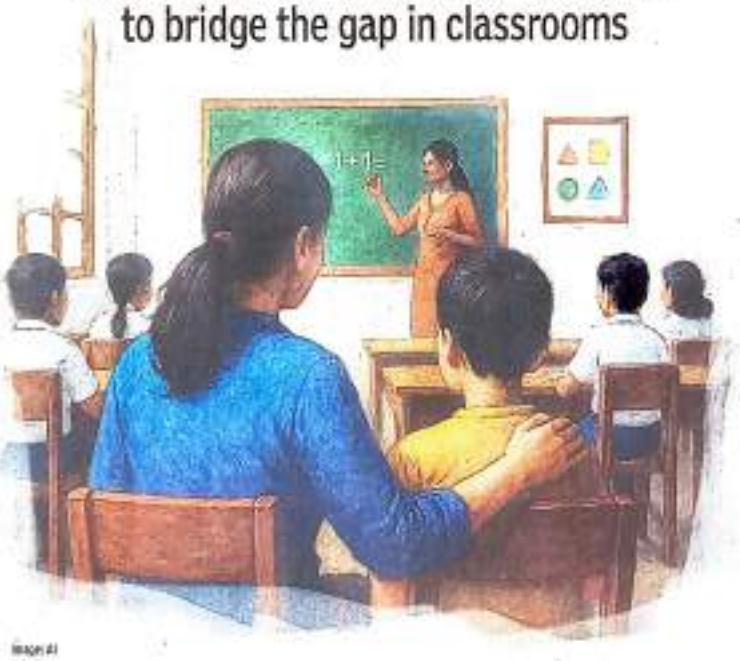

Image AI

Empathy is crucial... Every child is different, every day is different

"We have 6-7 shadow teachers in our school. They're hired by parents, but the school monitors their performance and updates parents regularly. It's a much-needed collaboration that benefits everyone," says Boski Sharma, special educator at Delhi Public School, Vasant Kunj. The school's shadow teachers support students with conditions such as severe anxiety, muscular dystrophy, and cerebral palsy.

Similarly, N C Jindal Public School's Learning Skills Centre in Delhi provides specialist support to students with learning difficulties like dyslexia and dysgraphia, often incorporating privately hired shadow teachers after school approval.

Most schools require shadow teachers to submit police clearance certificates and sign child protection declarations.

More Than An Academic Aid

Shadow teachers — often trained co-educators with diplomas in special education — do much more than simplify classroom tasks. They monitor students' emotional states, prevent crises, and build bridges between students, teachers, and parents.

"A good shadow teacher doesn't push a child beyond their capacity. They read early signs of anxiety or fatigue and intervene wisely," says Deepa Bhat Nair, a speech and language pathologist. "Empathy is crucial. They must stay calm during meltdowns without getting overwhelmed. Every child is different, every day is different."

Their support extends beyond children with developmental issues. Students dealing with social anxiety, low self-esteem, or emotional challenges also benefit from having a steady, understanding guide by their side.

A Mirror To Societal Change

Twenty years ago, when Shivanie Kapoor's son was diagnosed with autism, awareness was virtually nonexistent. "It was a silent epidemic of unspoken struggles," she recalls. Today, as a child and adolescent counsellor based in Noida, Kapoor sees how much progress has been made.

"Counselling is no longer a luxury or an afterthought. It's as fundamental to education as literacy itself," she says. "With rising academic pressures and invisible stressors, emotional and psychological support must be woven into our educational fabric."

The change is visible on the ground. "Even five years ago, many parents would deny their child's condition," says Gopa Dalal. "Today, there's greater willingness to learn about ADHD, dyslexia, autism — and to seek help."

For Preeti, an HR professional in Greater Noida, hiring a shadow teacher for her mildly autistic son Tejas (8) at The Wisdom Tree School was a turning point. "Shadows are an essential investment during a special child's early years. They help level the playing field and strengthen their future," she says.

For others like Abhishekh Datt, however, the shadow teacher was a short-term arrangement. "She helped our son settle into the classroom and build confidence. But after a year, we felt it was time to encourage independence. Shadows are valuable, but parents must reassess their role periodically," says Datt, whose 11-year-old now studies at Sheoran International School in Noida.

The Challenge Of Cost

While shadow teachers are slowly becoming essential partners in mainstream education, affordability remains a hurdle.

Experts believe the profession is poised for a transformation — from an informal role to a structured vocation backed by standardised training and accreditation. "Parents sometimes mistakenly hire tuition teachers or relatives without professional training. To maintain quality, we need formal certification and clear policies for integration into school setups," says Deepa Bhat Nair.

But cost is a serious barrier. Specialist shadow teachers with experience can charge between Rs 15,000 and Rs 45,000 a month — an expense that many middle-class families struggle to bear.

"Shadow teachers are a godsend for families of children on the autism spectrum," says Pallavi Shankar, mother of a 14-year-old boy with ASD. "But unless govt support expands, too many families will be priced out."

As Indian classrooms increasingly evolve to embrace diversity, shadow teachers are quietly rewriting the rules of inclusion — giving children who learn differently not just an education, but a fair chance at thriving.

NAV BHARAT TIMES (P-10), 07 MAY 2025

स्टूडेंट्स के आंसुओं की क़ीमत समझे NTA

भूपेंद्र शर्मा

मेडिकल एंट्रेंस टेस्ट NEET (UG) 2025 इस 4 मई को खत्म हुआ, तो देश के विभिन्न हिस्सों से उम्मीदवारों की रोते हुए तस्वीरें आईं। ये आंसू बरसों की मेहनत के पानी में बह जाने की पीड़ा से निकले थे। एक्सपर्ट्स तक कह रहे हैं कि इतना मुश्किल पेपर हाल के बरसों में नहीं देखा गया।

सवालों में सवाल । NEET (UG)-2024 में पेपर लीक की घटनाएं हुई थीं। 67 स्टूडेंट्स को 720 में से 720 नंबर मिले थे। ग्रेस मार्क देने पर आपत्ति उठी थी। जब ग्रेस मार्क्स पाने वाले कैंडिडेट्स का दोबारा पेपर हुआ, तो परफेक्ट स्कोर पाने वालों की संख्या कम हुई। इस बार पेपर लीक तो नहीं हुआ, लेकिन इसके सवालों को लेकर सवाल जरूर उठ रहे हैं।

समय कम मिला । नीट का पेपर 12वीं पास करने वाले देते हैं और NCERT बेस्ड 11वीं-12वीं के सिलेबस को आधार माना जाता है। स्टूडेंट्स के अलावा जानकार भी कह रहे हैं कि इस साल पूछे गए सवालों का स्तर AIIMS जैसी परीक्षाओं के समान था। फिजिक्स, इलेक्ट्रो डायनेमिक्स और थर्मो डायनेमिक्स जैसे टॉपिक बहुत कठिन थे। इस बार ऑप्शनल सवाल नहीं थे और समय 20 मिनट कम दिया गया था। ऐसे में टाइम मैनेजमेंट में परेशानी हुई।

जवाबदेही नहीं । मेडिकल हो, इंजीनियरिंग या फिर यूनिवर्सिटी एंट्रेंस टेस्ट - क्वेश्चन पेपर का ठीक से सेट न हो पाना गंभीर चिंता का विषय है। इससे सवाल खड़ा होता है कि क्या पेपर सेट करने वालों की कोई जवाबदेही ही नहीं होती? NTA की कार्यप्रणाली पर बीते एक साल से लगातार अंगुलियां उठ रही हैं। हाल में हुए इंजीनियरिंग एंट्रेंस टेस्ट JEE MAIN की आंसर-की में कई खामियां मिलीं।

बार-बार गलती । शायद पहली बार हुआ होगा, जब JEE MAIN की फाइनल आंसर-की जारी करने के बाद हटानी पड़ी और इसकी जगह नई आंसर-की जारी हुई। इंजीनियरिंग के पेपर

कॉमन रूम

में लगातार गलत सवाल आ रहे हैं, जिन्हें ड्रॉप करना पड़ता है। इन ड्रॉप किए सवालों के नंबर तो स्टूडेंट्स को मिल जाते हैं, लेकिन उसे जब इन सवालों से जूझना पड़ता है, उसका जो वक्त खराब होता है - उसे समझने की जरूरत है। 2023 के JEE MAIN के दोनों सत्रों को मिलाकर कुल 16 सवाल ड्रॉप हुए थे। 2024 में संख्या रही 10 और 2025 में 7।

CUET-UG में देरी । यही बदइंतजामी यूनिवर्सिटी एंट्रेंस टेस्ट CUET-UG में भी दिखती है, जो तय समय पर शुरू नहीं हो पा रहा। NTA ने 1 मार्च को बताया था कि 8 मई से एक जून तक CUET-UG चलेगा। 13.55 लाख कैंडिडेट्स 6 मई तक इंतजार करते रहे कि कोई जानकारी मिलेगी। परीक्षा से दो दिन पहले तक छात्रों को नहीं पता कि उनका टेस्ट किस शहर में लिया जाना है, डेटशीट क्या होगी? अब एंट्रेंस टेस्ट की तारीख बढ़ाई जा रही है। जहां एक-एक सीट के लिए संघर्ष है, वहां इस तरह के मैनेजमेंट से स्टूडेंट्स और उनके पैरंट्स पर दबाव और बढ़ जाता है। स्टूडेंट्स-पैरंट्स को एडमिशन प्लान बनाना होता है, यात्रा के लिए रिजर्वेशन कराना पड़ता है।

एक्शन की जरूरत । देश की इतनी बड़ी एजेंसी अपनी प्राइमरी ड्यूटी को पूरा करने में सफल नहीं हो पा रही। उसकी विश्वसनीयता खतरे में है। मेडिकल, इंजीनियरिंग और यूनिवर्सिटी एंट्रेंस एग्जाम - तीनों में करीब 40 लाख स्टूडेंट्स बैठते हैं और मामला उनके भविष्य से जुड़ा है। NTA को स्टूडेंट्स के आंसुओं की कीमत समझनी होगी, शिक्षा मंत्रालय को भी एक्शन में आना होगा। ⁂ 10

A step up

As India climbs up HDI rankings, rising inequality poses challenges

Amid a disturbing rate of deceleration in global development and a growing divide between the rich and the poor, India has inched up on the Human Development Index. In the 2025 Human Development Report, 'A Matter of Choice: People and Possibilities in the Age of AI', released on Tuesday, India ranks 130 out of 193 countries, from 133 in 2022. It registered an HDI value increase to 0.685 in 2023 from 0.676 in 2022. Coming on the back of two debilitating pandemic years, it can be said that India's recovery has been strong in the three fields HDI measures: "a long and healthy life, access to knowledge and a decent standard of living". India's life expectancy, at 72 years in 2023, is the highest level it has reached since the inception of the index in 1990 (58.6 years). Children, the report noted, are expected to stay in school for 13 years on average, up from 8.2 years in 1990; and Gross National Income per capita has risen from $2,167.22 in 1990 to $9046.76 in 2023. It gave a shout out to programmes such as MGNREGA, the Right to Education Act, the National Rural Health Mission and other initiatives for the improved status, but also sounded a word of caution about rising inequality, particularly significant income and gender disparities.

The female labour participation rate may have risen to 41.7% in 2023-24, as the Economic Survey of 2024-25 pointed out, but a stronger ecosystem needs to be built to ensure women join the workforce and are able to retain their jobs. There is a lag in political representation of women as well with no indication yet when the constitutional amendments reserving one-third of legislative seats for women will come into force. Underprivileged girls and boys still struggle to get an education, and until this anomaly is corrected, India's HDI value will not rise. Though the report highlights that 13.5 crore (of India's population of 144 crore) "escaped multidimensional poverty" between 2015-16 and 2019-21, income and gender inequalities have pulled down India's HDI by 30.7%, "one of the highest losses in the region." The thrust of the HDR this year was on AI and how human beings may benefit from it on development parameters. India, it said, has been able to retain 20% of AI researchers, up from nearly zero in 2019. Going forward, India must leverage AI to deliver on many fronts from agriculture to health care, education to public service delivery. But it is imperative that proper policy and safeguards are in place to thwart the risk that AI may deepen existing inequalities.

MILLENNIUM POST (P-7), 08 MAY 2025

NEXUS OF GOOD

Lighthouses of Learning

The innovative Mission Parivartan in Varanasi has transformed thousands of anganwadi centres into vibrant, tech-enabled, child-friendly spaces that address malnutrition, education, and urban space constraints

ANIL SWARUP

THE WRITER IS AN AUTHOR AND A FORMER CIVIL SERVANT

Over 3.5 lakh children aged six months to six years have benefitted from this intervention in the district over the last two and a half years

The Integrated Child Development Services (ICDS) department and anganwadi workers have a critical role to play in the nation's development. Beyond just being a centre for gathering children, an anganwadi centre is a place where large-scale issues like malnourishment and preschool education are addressed. As the country heads towards reaping the fruits of the demographic dividend, investment in children's future becomes even more critical. A number of researches have revealed that the initial six years of a child's life are crucial for both mental and physical development. This has also been recognised in the National Education Policy.

With the spirit of transforming anganwadis into advanced learning centres, an attempt is being made in Varanasi to equip them with both basic necessities and advanced learning infrastructure, such as smart TVs, Business and Learning Aid (BaLa) structural design, rooftop rainwater harvesting systems, solar panels, furniture for children, toys, learning materials, etc. Mission Parivartan has been launched in Varanasi with this objective. This approach is not limited to a few centres; the attempt is to provide scalable and district-wide solutions to the problem, to be implemented across all 3,000 anganwadi centres in Varanasi.

The Mission Parivartan initiative has achieved a remarkable milestone in transforming anganwadi centres across the district over the last three years. As part of the initiative, a total of 2,382 anganwadi buildings have been rejuvenated, with an impressive 96 per cent saturation. Additionally, 692 new anganwadi centres have been constructed, bringing the total to 3,074. This transformation aims to provide a conducive learning environment for young children, promoting their overall development and well-being. Over 3.5 lakh children aged six months to six years have benefitted from this intervention in the district over the last two and a half years.

The upgraded anganwadi centres boast several key features, including the saturation of all 18 basic parameters of *Kayakalp*, such as baby-friendly toilets, hand-washing units, BaLa-based painting, and LED TVs to support learning and make education more engaging for children. This is also ensuring a comfortable and interactive environment. Furthermore, these centres are now solar-powered, enabling a round-the-clock electricity supply. Other notable features include Poshan Vatika to promote health, hygiene, and sustainability. Outdoor play equipment has also been installed to encourage physical activity and development. The design of these anganwadi centres has been kept in consonance with the idea of learning and mental growth, ensuring that every part of the centre serves as a source of education. Features such as writable floors, low wall greenboards, low-hanging paintings, and wall displays ensure that each activity comes with learning, and the building's architecture itself acts as a source of learning to the kid.

Under Mission Parivartan, a total of 2,382 anganwadi buildings have been rejuvenated, with an impressive 96 per cent saturation

Beyond just the infrastructure, simple things like furniture, kitchen items, storage boxes, utensils, toys, first-aid kits, and utility kits with mirror, towel, and nail cutter have also been provided at all centres so that these centres function on a learning-by-doing model.

In urban areas, Mission Parivartan has made significant strides in addressing the challenge of space and land availability. Very rarely has any solution to the urban anganwadi centre problem been attempted in the past. In city-based districts and with the ever-growing size of cities, this problem is expected to become even more severe in the future. This problem existed in 991 urban anganwadi centres in Varanasi, which were functioning in dingy streets and corridors. To address this, a total of 750 new rented buildings have been provided to accommodate anganwadi centres with new rent agreements, while 65 old and unused buildings have been repurposed into anganwadi centres. Additionally, 25 Purta Cabins and recycled bus compartment-based anganwadi centres have been set up in congested areas, ensuring accessibility and convenience. These Poeta Cabins have been particularly effective in solving the issue of space constraints, allowing anganwadi centres to operate in parks and playgrounds. The centres now exist in beautiful, air-conditioned rooms with smart classes for learning. The once-deserted anganwadi centres now have over 1 lakh children proudly attending them daily.

Assistance came from engineering departments, CSR partners, and NGOs, who devised standard guidelines and evolved models to address local issues. Subsequently, all field staff were trained to use these guidelines and models. Supervisors and anganwadi workers also played a pivotal role in adopting new and upgraded tools of learning, like tablets, smart TVs, and various learning materials for children.

A huge challenge was to ensure land for new centres, identifying rented buildings in urban areas, and planning the priority and locations in a manner that benefitted the whole district in a phased manner. Weekly meetings were held with Supervisors, CDPOs, and BDOs to coordinate these efforts. Standardised new rent agreements were drafted. Within a month of these interventions, results started coming up. For monitoring different components, a control room was set up at the ICDS office, and Google Forms were used for daily reporting on various indicators. CSR funds came in handy for rolling out the programme. Help came from companies like Vedanta and Reliance Foundation. Besides CSR, MGNREGA funds, Gram Panchayat funds, and Critical Gap funds were also utilised to bridge small gaps in the campaign—such as for Poshan Vatika, electrification, boundary walls, etc. There was enormous support from political leadership.

The impact of Mission Parivartan has been profound. Attendance at anganwadi centres has increased significantly—from 35 per cent to 80 per cent—indicating improved engagement and enthusiasm among children. Moreover, severe malnourishment has decreased dramatically, from 7.7 per cent to 0.12 per cent, reflecting the effectiveness of the programme. Learning outcomes have improved drastically. NIPUN assessment results show a remarkable improvement from 40 per cent to over 90 per cent for Class 1 students in government primary schools. Parents are now sending their children to anganwadi centres instead of private play schools, highlighting the success of the initiative.

What has been achieved in Varanasi under the inspired leadership of this young IAS officer, Himanshu Nagpal, is amazing. Here is a model that can be replicated and scaled through public-private partnership in the true spirit of Nexus of Good.

Views expressed are personal

Is academic freedom a made-up concept?

In the backdrop of Trump's moves on Ivy League institutions in America, a look at the scope and limitations of freedom on campus, and why it's not always easy with institutions being pulled in different directions

FULL CONTEXT

Atanu Biswas

In Satyajit Ray's 1980 satirical fantasy film *Hirak Rajar Deshe*, literally "In the kingdom of the Diamond King", the Education Minister of the king dictates what should be taught in school. Finally, the Minister closes the school. Is the story a true reflection of the contemporary world, to some extent?

The nature of education and how it shapes society can be examined in a variety of contexts, from the fictional kingdom of the Diamond King to real-life Donald Trump's America. Given that Columbia, an Ivy League university, surrendered its academic freedom, and Harvard, the oldest and richest American university, has chosen to legally defend it, one would wonder what academic freedom is and what its scopes and limitations are.

When then President Pranab Mukherjee spoke at the "International Buddhist Conference" in Nalanda in 2017, he invoked Nalanda and Taxila, the ancient universities, to pitch for an atmosphere free from prejudice, anger, violence, and doctrines. "It must be conducive to free flow intellectual persuasions," he stated.

A difficult path

However, it's not so easy, always. Scholars who disagreed with church theology or behaved in ways the church deemed unacceptable risked persecution in medieval Europe. Then, philosopher Wilhelm von Humboldt created a new university in Berlin in the early 19th century. The fundamental principles of academic freedom – freedom of scientific inquiry and the unification of research and teaching – were institutionalised in and diffused to other countries by the Humboldtian model of higher education. Today's seemingly made-up concept of academic freedom can be summed up as follows: students have the right to learn in an academic environment free from outside interference, and teachers have the right to instruct. The right of teachers to engage in social and political critique is another definition, though. In a 2022 paper published in the *Houston Law Review*, Yale Law School professor Keith E. Whittington stated that universities committed to truth-seeking and the advancement and dissemination of human knowledge essentially require "robust protections for academic freedom for scholars and instructors."

Loud voices: Protesters march against the Trump administration's policies and to demand 'liberty, solidarity and accountability' from their universities in New York, U.S. FILE PHOTO

At the UNESCO-organised International Conference in Nice in 1950, the Universities of the World pledged for "the right to pursue knowledge for its own sake and to follow wherever the search for truth may lead." Academic freedom was then defined as "the freedom to conduct research, teach, speak, and publish, subject to the norms and standards of scholarly inquiry, without interference or penalty, wherever the search for truth and understanding may lead" at the first annual Global Colloquium of University Presidents held at Columbia University in 2005. But is defining and accomplishing academic freedom really that straightforward?

Tenure, promotions, pay hikes, research funding, and academic honours are all intimately correlated with research publications in the current academic environment. Thus, today's scholars are driven by the peer pressure of publishing. And the interest of funding agencies has a significant impact on academicians' research. Nowadays, universities are also concerned with their international rankings, which are largely based on research papers.

'Publish or perish' culture

How serious is today's "publish or perish" culture? Quite a bit, indeed. One significant exception was 2013 Nobel laureate British physicist Peter Higgs, well known for the Higgs Boson. He stated that he became "an embarrassment to the department when they did research assessment exercises" and that he would have most likely been fired from his job at the University of Edinburgh if he had not been nominated for the Nobel Prize in 1980. However, he thought that because he would not be deemed "productive" enough in today's academic system, no university would hire him. Thus, today's academic system doesn't even permit a future Nobel winner to peacefully conduct his own research without regularly generating research papers.

Nowadays, there's little scope for leeway in a pre-scheduled framework of university curriculum. Furthermore, as American biologist Jerry Coyne put it, a geology teacher who casually informs his students that the earth is flat is not exercising academic freedom but rather is failing in his duties. Compared to general freedom of speech, academic freedom of speech is more limited. For instance, a non-academic can criticise the effectiveness of vaccines, but they can only do it with academic freedom if they have the necessary academic credentials.

And, importantly, academic freedom may be as much as a country's politics and society at the time would have desired to offer academic institutions. For instance, several fields of research, including sociology and genetics, were outlawed as "bourgeois pseudoscience" in the Soviet Union in the 1930s.

What's the freedom of a flying kite, indeed? When a kite is flying high, it means that the person holding the spool has just let it soar. Without the monarchs' generous financing and allowing foreign scholars and students, would ancient Nalanda or Taxila have been able to exercise their academic freedom? What happens if that person believes the kite is behaving strangely? Of course, a democracy has checks and balances, such as the judiciary and periodic elections. Therefore, academic freedom and political interference in it are continually being redefined by changing sociopolitical dynamics.

Academic freedom certainly sets up a protective umbrella over scholars' activities; however, this protection is neither absolute nor guaranteed.

(Atanu Biswas is Professor of Statistics, Indian Statistical Institute, Kolkata)

THE GIST

Today's seemingly made-up concept of academic freedom can be summed up as follows: students have the right to learn in an academic environment free from outside interference, and teachers have the right to instruct

Academic freedom was defined as "the freedom to conduct research, teach, speak, and publish, subject to the norms and standards of scholarly inquiry, without interference or penalty, wherever the search for truth and understanding may lead" at the first annual Global Colloquium of University Presidents in 2005

Tenure, promotions, pay hikes, research funding, and academic honours are all intimately correlated with research publications in the current academic environment

DECCAN HERALD (P-6), 10 MAY 2025

Human development: Gaps delay goals

India has made a slight improvement in its ranking on the latest Human Development Index (HDI), but the report also shows that the country has much more to achieve. It has recorded a three-place rise from its 2022 rank of 133 to 130, out of 193 countries, but the fact remains that India is still in the bottom one-third of the world. According to the Human Development Report, 'A Matter of Choice: People and Possibilities in the Age of AI', India has registered an HDI value increase to 0.685 in 2023 from 0.676 in 2022. Considering that the pandemic years badly set the country back, just as much as the rest of the world, India's performance is credit-worthy in three areas. These are "a long and healthy life, access to knowledge, and a decent standard of living". India's life expectancy improved from 56.6 years in 1990 to 72 years in 2023. Children's tenure in school increased from 8.2 years to 13 years and the per capita income from $2,167.22 to $9046.76 during the period. Initiatives such as MGNREGS and RTE have a role in this.

However, India also faces serious challenges in other areas – there is a high level of income inequality that has reduced the country's HDI by as much as 30%. While inequality in health and education has lessened, it remains high in terms of gender and income. Female labour force participation has improved but remains low. Political representation of women is also low and the constitutional amendment to improve this is yet to come into force. Much of India's neighbourhood mirrors these shortcomings, except Pakistan and Afghanistan – both have reported poorer performance. China and Sri Lanka have secured higher positions in the index.

New rankings see India jump three spots but issues such as income inequality persist

Globally, the report shows that human development has stalled to a 35-year low because of various factors including the Covid pandemic and the economic slowdown in most parts of the world. The annual HDI increase was the lowest in 2023 since 1990. A positive takeaway from the report is the widespread hope that Artificial Intelligence (AI) will boost human development. It is expected that AI will improve productivity, create jobs, and show results in areas such as education and health. The report says India has been able to retain 20% of its AI researchers. The country needs to use AI in diverse areas such as agriculture, healthcare, and public service delivery. At the same time, adoption needs to be backed by strong policies and safeguards to prevent AI from exacerbating inequalities.

MILLENNIUM POST (P-10), 11 MAY 2025

Trails of the Learning Curve

Based on extensive fieldwork in seven diverse slum clusters, From Shanties to School by* Manimala Roy *is a deeply insightful exploration of how India's economic liberalisation in 1991 catalysed a silent yet powerful educational revolution in the urban margins of Delhi

When the British left India in 1947, we were an impoverished nation. Our poverty ratio was a staggering 80 per cent, and not more than 12 per cent of our people, predominantly upper caste males living in urban centres, had some modicum of literacy. From then to now, there has been a sea change. While governments, denominational institutions, civil society organisations and corporates have made significant contributions to the spread of literacy, the core argument of Manimala Roy's excellent study *From Shanties to Schools: A Silent Movement* is that the main driver of this change has been the economic liberalisation of 1991.

Price: ₹650
Publisher: Konark Publishers

The Metropolis of Delhi

Taking the metropolis of Delhi as an example, where she has done extensive field work, she argues that the reforms led by Narasimha Rao-Manmohan Singh not only generated opportunities and resources for children of migrants living in the *Jhuggi-Jhopri* (JJ) clusters of Delhi, but also convinced their parents that education was the one and only way out of this morass. Her study of the lives of migrant workers and their children in the shanty towns of Delhi reveals the 'migrant' view point about education as the harbinger of social respect, empowerment and employment. Interestingly, as incomes rose, the middle class of Delhi moved their children to private schools, thereby creating the space for children of JJ clusters to enroll in state government, municipal and NDMC schools.

The 1990s: Micro Reality and Global Perceptions

At the end of the first decade of liberalisation, I found myself as a guest scholar at The Brookings Institution at Washington DC. Stephen Cohen, the profound scholar on the political economies and strategic policies of India and Pakistan, headed the South Asia desk at this prestigious think-tank. These were pre RTI days, when governments held information close to their chest. He asked me to exercise my clout as a (then) serving civil servant to help him collect information from state governments about the Sarva Shiksha Abhiyan (SSA, Education for All) under the New Policy on Education (NPE), 1992, for his forthcoming book *'India: Emerging Power'*. Earlier in that decade, based on nudges from Jagdish Bhagwati, Jean Dreze and Amartya Sen, the Planning Commission and Ministry of Human Resource Development had adopted the SSA as a 'nation as a whole' approach to education. This translated into the Government of India providing additional resources to state governments to ensure that 'no child was left out of school', and that adult literacy centres came up within 'walkable distances'. With Kottayam and Ernakulam districts in Kerala becoming *fully* literate in 1989, every other District Magistrate in the country started looking upon cent percent enrolment and 'full literacy' as achievable milestones.

However, the point that I wish to recall is that one fine morning – probably in June of 2000 – Prof Cohen told me and Gen Jahangir Karamat (an Ex-Army chief of Pakistan, who was also at Brookings as a senior Fellow at the same time) over coffee that finally, India had crossed the hump, as more people were now literate, than illiterate. This was certainly not the case with Pakistan, and he inferred with great prescience that India would leave Pakistan behind in every field – be it economic power, military might, or political stability. This then is the power of education – for nations, communities, families and of course, individuals. He mentioned this in *Domestic Dimension* – the fourth chapter of his book *India: Emerging Power*.

> **Parents from all castes and classes in the country, who provided their kids with quality education, have powered India's progress**

Education as the Driver for Change

If today, India has emerged as the third largest, and the fastest growing economy of the world, substantial part of the credit goes to the passionate commitment of all castes and all classes in the country to provide their next generation with the best quality education they can scout for their wards. Roy has painstakingly studied the lived realities of students, parents and educators of children living in seven JJ clusters – in seven of the eleven revenue districts of Delhi. These range from the absolutely dilapidated ones in Govindpuri to the cleaner and better organised SIM (South Indian Madrasi) Basti near the Delhi university, and the relatively better off slum behind the NSCI in the NDMC area; each slum has its own demographics, and history, but what unites them all is the commitment of the parents and the children together to transform their lives through education. Another very important finding is that educational and occupational aspirations of migrant children are not gender-specific. They receive support from their parents in their quest to improve their lives and, by implication, that of their parents. However, perhaps because of lack of awareness, and absence of opportunities for vocational training in the school system, most students were keen on settling down early to positions in retail, hospitality, nursing, pharma and clerical positions, which is also reflective of the changing character of the city as the hub of services. Delhi offers miniscule opportunities in agriculture, and the base of organised manufacturing is also limited. So, in many ways, the choices exercised by the students and their parents, collectively, are defined by 'bounded rationality'. However, one thing is certain – the scale and scope that is open to them is far greater than that of the country cousins who are still eking out a paltry existence from the parched fields in their native villages.

But even if they are better off than their cousins they have left behind, as first generation learners, they face a challenge from those whose parents have had the benefit of having a settled job in the metropolis. They cannot seek the support of their parents or grandparents, are unable to afford private tuition in the STEM stream, and even if some families have the resources, quality tuition teachers are not available in their immediate vicinity.

The author also draws our attention to the enrolment of children from JJ clusters into public schools as part of the RTE initiative. However, this has had its own share of externalities. Her research findings show that nearly 65 per cent of the students from these clusters had a sense of an inferiority complex in the company of children from wealthier households. They led a kind of a double life, for while uniforms made them look alike, everything else – the gadgets, the mobiles, the social spaces, the lunch boxes, birthday parties and parental profiles – aggravated their sense of deprivation. Schools had not given adequate attention to this very important aspect, and this was proving to be traumatic for impressionable young minds.

In fine, this is a book which must be read not just by educators and policy professionals, but by all those who believe, in the words of Antoine de Saint-Exupéry, the author of *Little Prince*, "as for the future, your task is not to foresee it, but to enable it". Manimala Roy has taken the first step in this direction. Let us follow her example to contribute in whatever way we can to create '- more equitable India, with education as the principal driver of change.

Beyond English literature

In India, where English is a second language, ELT plays a vital role in the education system and deserves to be recognised as an independent discipline

GETTY IMAGES/ISTOCKPHOTO

Albert P Kerans

"Are you taking the UGC-NET?" I asked a young man who had completed his Master's in English Language Teaching (ELT) a year ago.

"I'm not sure I can crack it," he said hesitantly. "The subject I've specialised in – English Language Teaching (ELT) – isn't even on the list of prescribed subjects. So, I'm forced to choose something related, like English Literature. It's not just me; many of my classmates who specialised in ELT have chosen not to take the exam at all..."

The UGC National Eligibility Test (NET) determines candidates' eligibility for Junior Research Fellowships (JRF) and Assistant Professorships by assessing their knowledge in a specific subject. According to the National Testing Agency, the June 2025 session will include 85 subjects, yet ELT remains excluded.

When the UGC-NET was introduced in 1989, ELT was not well established in India and was, therefore, not included. However, according to S. Mohanraj, retired professor from EFLU, Professor Tharu of the Central Institute of English and Foreign Languages (CIEFL), Hyderabad, had recognised the importance of the field and advocated for its inclusion even at that time.

Candidates for the exam are expected to select a subject based on their postgraduate specialisation. Since ELT is not on the list, many ELT graduates are compelled to opt for English Literature, which focuses heavily on literary content and literary theory, making it a poor match for ELT specialists.

Evolving academic landscape

Traditionally, English teachers at the tertiary level held qualifications in English Literature. Consequently, instruction in General English and other language-based courses often lacked grounding in second language acquisition and pedagogy.

However, some educators pursued additional qualifications in ELT and gained expertise in language teaching methods.

Over time, the academic landscape evolved and Master's programmes that once focused solely on literature began to incorporate language components.

Eventually, dedicated Master's programmes in ELT were introduced that trained students in second language acquisition, teaching methodologies, English for Specific Purposes (ESP), technology-assisted learning, and applied linguistics, making graduates more suited to teach English language skills than literature graduates.

ELT has now gained significant traction in India and universities increasingly offer programmes at postgraduate and doctoral levels, and student enrolment is steadily rising. Yet, ELT remains absent from the UGC-NET subject list, 35 years after the exam's inception.

There are several compelling reasons to recognise English Language Teaching (ELT) as a distinct academic discipline and to include it in the UGC-NET list of prescribed subjects to recruit ELT specialists to teach English in colleges.

Fundamental differences

In India, where English is a second language, ELT plays a vital role in the education system, as English is integrated into the curriculum at all levels and is essential for the professional development of individuals who need to communicate effectively in the language.

Teaching English literature and teaching the English language are fundamentally different in their purpose, content, and methodologies. The primary goal of the former is to enable students to appreciate, analyse, and interpret literary texts, whereas the aim of language teaching is to help learners achieve proficiency in English.

Accordingly, literature teachers focus on exploring texts from critical perspectives, while language teachers concentrate on developing learners' linguistic and communicative competence.

Further, literature instruction typically follows a text-centric approach, emphasising literary theory and critical thinking. In contrast, language teaching adopts a learner-centric approach, with a focus on pronunciation, vocabulary, grammar, and practical communication skills. Another major difference lies in classroom practice: literature classes are often lecture-based, while language classes are typically task-based and interactive.

Universities abroad select candidates with specialisation in ELT to teach language courses such as General English, English for Communication, Business English, English for International Term, English for Specific Purposes (ESP), English for Academic Purposes (EAP), and so on.

Teachers with a background in ELT possess the necessary knowledge, skills, and attitudes for effective English teaching. Their expertise in second language acquisition theories allows them to understand how learners acquire language and to adapt their teaching using diverse methods such as the communicative approach, task-based learning, and technology-enhanced instruction.

As a result, they are well-equipped to prepare students not only for academic achievement but also for success in professional and international contexts.

Given the global status of English and its significance in India, it is imperative that language teaching be led by professionals with formal training in ELT. This can only be possible if ELT is recognised as a distinct subject in UGC-NET.

Institutions such as the English and Foreign Languages University (EFLU) and professional bodies like the English Language Teachers' Association of India (ELTAI) should actively campaign for the inclusion of ELT in the UGC-NET subject list. Xavier Pradeep Singh, National President of ELTAI, has stated that the association has already launched a signature campaign and is planning to submit a petition to the UGC.

It is time for ELT to be acknowledged not as a subset of literature, but as a vital, independent discipline deserving of its rightful place in India's academic and professional landscape.

The writer is an ELT resource person and education columnist. Email: [redacted]

9/5/25

INDIAN EXPRESS (P-8), 12 MAY 2025

PLUGGING A GAP

ITI upscaling project is a beginning towards addressing human capital needs of industry

TRADITIONAL WORKSHOPS ARE today giving way to manufacturing units that demand digital fluency, competency in data analysis, AI and robotics-related skills and the ability to work with climate-friendly engineering technologies. However, for at least a decade, surveys and reports have been flagging the skill deficits of the Indian workforce. Only a small fraction of graduates from the Industrial Training Institutes (ITI) get placed in the cutting-edge economy. The deficit also means that a large section of the youth lacks avenues and support systems to realise its potential. The government's move to overhaul ITIs was, therefore, long overdue. Last week, the Union Cabinet approved the National Scheme for Industrial Training Institute Upgradation and sanctioned the setting up of five National Skilling Training Institutes (NSTI). The Rs 60,000-crore scheme aims to forge links between the technical education ecosystem and industry.

Established shortly after Independence, ITIs were intended to serve as vocational training centres for the emerging industrial sector. Today, India has close to 15,000 such institutes. Nearly 80 per cent of them came up after 2006-2007 when the National Council for Vocational Training relaxed rules, leading to a mushrooming of private ITIs. However, abetted by a faulty monitoring system, many flouted even the most basic norms. Audits conducted by the Directorate General of Training revealed that accreditation was granted to ITIs even while they were under construction or lacked basic safety measures. The government's move to restrict the new programme to 1,000 ITIs could streamline the system.

Twenty lakh youth will be skilled in the revamped ITIs over five years. By conservative estimates, this would cater to about a fifth of the human capital needs of industry. The ITI upscaling project should, therefore, be seen as a beginning. Several experts have argued that the task of schooling professionals for the smart economy is too enormous to be left to government alone. A tenth of the new programme's costs will be borne by the private sector, which has been accorded a more active role in designing courses and training faculty. The government must nudge industry towards enhancing its engagement with skill development.

DE/12/5

The educational landscape, its disconcerting shift

Shelley Walia

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Education has historically been regarded as the cornerstone of societal advancement – a realm where critical thinking, free inquiry, and the pursuit of knowledge could flourish. At its best, higher education had always cultivated intellectual independence, nurtured dissent, and inspired progress across disciplines and societies. The boundaries of human understanding were continually pushed through unfettered dialogue and academic exploration.

Yet, in recent decades, the educational landscape, especially within universities, has undergone a profound and disconcerting shift. Institutions once celebrated for fostering independent thought now appear increasingly constrained by bureaucratic controls, external mandates, and ideological gatekeeping. Rather than serving as laboratories of innovation and resistance, the Canadian thinker, H.A. Giroux, sees universities becoming engines of conformity, prioritising managerial efficiency and market alignment over academic freedom and intellectual integrity. Indoctrination, intimidation and intolerance become the central ingredients of education.

From independence to centralisation

A particularly disquieting development in this decline is the unyielding centralisation of academic curricula. In the past, universities enjoyed considerable autonomy to craft syllabi tailored to their students' needs, faculty expertise, and the shifting contours of intellectual inquiry. Today, however, this independence is steadily eroding. Centralised agencies – be they governmental bodies such as the University Grants Commission (UGC) or frameworks such as the National Education Policy (NEP) – increasingly dictate the structure and content of academic programmes. These prescriptions are often influenced not by academic merit or pedagogical philosophy, but by economic agendas or partisan leanings.

The UGC, originally intended to coordinate academic standards, has mutated into an instrument of control. It dictates appointments, interferes in administration, and shapes curricula, often with scant regard for academic judgement, thereby becoming the long arm of a state increasingly intolerant of independent or critical thinking. Let us be clear: this is not about standards – it is about submission. Under the guise of regulation, the UGC has eroded the autonomy of Indian universities to the point of extinction. The promise of self-governance has been replaced with bureaucratic tutelage. An institution that is stripped of autonomy in faculty selection, research direction, and protection of dissent ceases to be a university in any meaningful sense.

The consequences of this centralisation are far-reaching. It undercuts not only academic autonomy but also produces compliant drones, regiments intellectual discourse, and marginalises alternative perspectives. When syllabi are standardised across regions and institutions, the intellectual ecosystem becomes monolithic – devoid of diversity, nuance, or radical innovation. This intellectual flattening not only stifles creativity but also discourages the interrogation of dominant narratives and received assumptions.

Pressures on the academic climate

Historically, campuses have played a vital role in catalysing social change – whether in anti-colonial movements, civil rights struggles, or pro-democracy uprisings. By exerting control over what is taught and how it is taught, policymakers and administrators ensure that universities remain compliant rather than confrontational. Suppressing critical perspectives ensures that higher education does not produce citizens who question authority or imagine alternatives to the status quo. Take, for instance, a research scholar who gives a reference to Noam Chomsky's views on the decline of democracy or talks about nationalism and human rights. There is every chance that the student and his supervisor will be reprimanded by the state, a preposterous intervention indeed.

Take, for instance, the resurgence of reactionary politics that has led to increasing interference in academic affairs. Scholars whose work critiques systemic injustice, discriminatory politics, corporate exploitation, or nationalist rhetoric often find themselves marginalised, defunded, or even expelled or deported. Entire disciplines, especially in the social sciences and humanities, are being defunded or dismissed as politically awkward.

Such pressures have had an unsettling effect on academic life. Teachers, wary of professional reprisals, begin to engage in self-censorship. Controversial research topics are sidestepped not out of disinterest, but out of fear. Students, too, internalise this climate of caution, refraining from engaging critically with contentious issues, apprehensive about academic penalties, peer backlash, or threats to their future careers. The outcome is a smothering intellectual climate where fear of dissent trumps inquiry, and conformity is mistaken for collective wisdom, resulting in the decline of public intellectuals.

This erosion of academic freedom is compounded by the increasing corporatisation of higher education. Universities are no longer viewed as public institutions dedicated to knowledge and social advancement. Instead, they are treated as businesses, expected to generate profit, attract investment, and enhance their brand image. The logic of the market now governs the priorities of educational institutions, reshaping both what is taught and why it is taught. The corporate corruption of higher education and the wrecking of the university is indeed apparent.

Institutions once celebrated for fostering independent thought, now face bureaucratic controls, external mandates and ideological gatekeeping

Consequently, disciplines that promise immediate financial returns – such as technology, business, and engineering – receive substantial funding and institutional support. Meanwhile, fields that emphasise critical thought, ethical reflection and historical understanding – such as philosophy, literature, and the arts – are sidelined as unproductive or irrelevant. The value of education is thus reduced to its marketability, and knowledge becomes a commodity to be consumed rather than a pursuit to be cherished.

It is often seen that faculty members are not immune to these pressures. Academic faculty are increasingly subject to performative pressures, evaluated through metrics such as publication counts and student satisfaction ratings. The proliferation of global university rankings exacerbates this issue, prioritising conformity to western norms and standardised metrics over indigenous intellectual traditions and context-specific inquiry. This regime incentivises strategic branding and replication of external models, rather than genuine academic innovation.

Academic governance as a concern

This shift has also altered the structure and the ethos of academic governance. University leadership, it is now proposed, can comprise administrators drawn from corporate backgrounds rather than only academic. These individuals will, understandably, bring with them a managerial mindset that privileges efficiency, quantifiable outputs, and brand visibility over scholarly rigour and pedagogical richness. Furthermore, the appointment of Vice Chancellors from non-academic fields compromises the collegial culture of universities, disconnecting decision-making from teaching and research realities.

Visibly, the prevailing trend of appointing academics lacking intellectual engagement with literature and social issues raises concerns about ideological biases influencing leadership selections. To address this, universities should prioritise appointments grounded in the intellectual ethos of liberal arts and sciences, ensuring that selection procedures are rigorous and objective.

The crisis of education has, therefore, at its core, a crisis of imagination. The university must at all costs be preserved as a sanctuary of intellectual freedom, where merit is not the casualty. Failure to do so imperils not only education but also the very idea of democracy. By reclaiming the university's essence, we restore the transformative potential of knowledge, rather than reducing it to mere transaction.

STATESMAN (P-11), 13 MAY 2025

Financial mathematics

The key to thriving global finance industry

A financial mathematics degree is the application of mathematical rigour to financial theory. Such degrees are designed for individuals who are keen to understand what makes the financial markets tick.

SAM MARSH

With geopolitics increasingly uncertain, many are seeking ways to navigate through challenging times. Nowhere is this more true than in the financial markets, where stakes are high and the future unknown. But while no one has a crystal ball, some put themselves at a tremendous advantage - and a competitive edge in the job market - by educating themselves on the workings of the system which lies behind global finance: the cool rationality of financial mathematics.

Mathematics is indifferent to politics. And while it cannot tell you which way markets will move, it can quantify how far they might rise or fall, and give you the tools to protect yourself against losses. It can help you to decide whether to buy or sell, and aid you in identifying irrational pricing. By stripping away extraneous detail, it can reduce the overwhelming complexity of the global financial system to a small number of core assumptions. Applying mathematical reasoning, the logic behind asset prices and the trade-offs between risk and reward are revealed. Analyse the data, apply the theory, and get ahead of the game.

Why study financial mathematics?

At the heart of a financial mathematics degree is the application of mathematical rigour to financial theory. Such degrees are designed for individuals who are keen to understand what makes the financial markets tick. With care and meticulous analysis, simplicity can be found. Truths are revealed that were previously obscured, and Nobel Prize-winning theorems are laid bare.

By obtaining a deep understanding of stochastic processes, data science and economics, among other things, students of financial mathematics gain essential skills required for decision-making in high-stakes environments such as investment banking, insurance, and corporate finance. They acquire the analytical tools necessary to tackle some of the most challenging and pressing issues in the finance industry, often using coding environments such as Python and R to analyse real-world data or create bespoke financial applications.

Most courses will cover the theory behind financial mathematics' most famous results, as used by traders the world over, including the Black-Scholes equations and the Capital Asset Pricing Model. Those who understand not just how to apply the results but also the theory that underlies them will be well placed to spot opportunities that may not be apparent to all.

Career prospects in financial mathematics

Graduates with expertise in financial mathematics are in high demand, with diverse and potentially lucrative opportunities in major financial hubs across the world, including India's rapidly expanding fintech and banking sectors. The rise in fintech and the growing importance of data-driven decision-making mean there is an increasing demand for professionals who can understand and apply mathematical principles to real-world financial challenges.

The highest financial rewards are likely to be found in investment banking, where the theoretical concepts on portfolio construction and risk management are essential to the job. An understanding of how interest rates affect valuations and how to gauge the level of return necessary for a given level of risk-taking allows traders to make informed decisions on market opportunities.

Others may seek a career in insurance or actuarial work, where evaluating financial risks and accurately planning cash flows, and hedging strategies are crucial. Would-be accountants will benefit from a solid understanding of the theory that underlies their organisation's financial structure, especially when mergers and acquisitions are on the cards.

The skills developed in a financial mathematics degree are widely applicable. Even those who choose not to pursue a career in high finance will gain a deep understanding of how it shapes society and drives decision-making, essential skills for business, government, journalism, and many other aspects of modern society.

As India's financial sector continues to grow, there has never been a better time for students to invest in this specialised area of study. Whether motivated by career ambitions, a desire to understand a fundamental part of modern society, or simply the love of the subject, the challenge and beauty of financial mathematics is something to embrace.

The writer is a university teacher in mathematics at the University of Sheffield, UK.

STATESMAN (P-11), 13 MAY 2025

Learning without borders

DINESH GUPTA

Education is no longer limited by geography. As Indian families extend globally, the need for accessible, quality Indian education beyond borders is growing. Many non-resident Indian (NRI) parents desire their children to maintain connections with Indian curricula, cultural roots, and academic rigour. However, they often find local schooling options to be expensive, inconsistent, or not aligned with their long-term goals.

Online schools are revolutionising education for NRIs by addressing this need, effectively bridging the gap between global mobility and maintaining academic continuity. Through a structured, recognised Indian curriculum that offers flexibility, affordability, and personalised learning, online schools are redefining how NRI students experience education.

Recognised Indian curriculum, accessible globally

Unlike informal tutoring, online schools adhere to structured CBSE and NIOS curricula. Certified teachers deliver these programs, ensuring students receive a high-quality, standardised education, no matter if they are in Dubai, London, or New York. Certificates from an Indian school are recognised and widely accepted globally.

Academic continuity

Additionally, many parents plan to have their children return to India for higher studies or competitive exams like JEE, NEET, or UPSC. Therefore, staying aligned with the Indian education system ensures a seamless transition and allows studies to continue regardless of location.

Flexibility and adaptability

Online schools also provide recorded classes, flexible schedules, and a self-paced curriculum, enabling students to continue their education without disruption, which is especially helpful for NRI families who frequently relocate due to professional commitments.

Method of teaching

Moving away from traditional lecture-based methods, many online schools today emphasise experiential learning—a teaching approach that combines practical application with theoretical understanding. This philosophy closely mirrors the ancient Indian Gurukul system, where learning was grounded in real-life tasks, mentorship, and inquiry-based exploration.

Instead of presenting concepts as fixed facts, students are encouraged to explore and discover knowledge through interactive learning tools and guided activities. Teachers play the role of facilitators, helping students construct understanding through questioning and reflection. Textbooks and theoretical materials are often introduced after the concept has been experienced, reinforcing what the child has already grasped intuitively. This "practice first, theory later" model not only strengthens comprehension but also makes learning more meaningful and enjoyable.

Such an approach is especially valuable for NRI families seeking to preserve Indian educational values while embracing modern, flexible modes of learning. It allows students to stay connected to their roots through culturally resonant, concept-driven education—no matter where they are in the world.

Personalised mentorship

In thoughtfully designed online schooling environments, teacher training often includes not just academic methods but also socio-emotional practices like meditation, yoga, and group activities. This fosters a nurturing, guru-shishya-style relationship where learning is tailored to individual needs. Small class sizes enable one-on-one attention, allowing students to engage directly with teachers and learn at a comfortable pace. This approach supports diverse learning styles and addresses the challenge of high student-to-teacher ratios seen in many traditional schools. For families seeking flexibility and meaningful teacher-student interaction, especially those living abroad, such models offer a more responsive and balanced educational experience.

Maintaining Indian culture and language

Online schooling helps maintain a connection to Indian culture and language by integrating them into the curriculum. Students have opportunities to learn Indian languages and discuss festivals, history, and values. This is especially valuable for NRI families wanting to preserve their linguistic and cultural identity. The presence of Indian teachers and peers promotes discussions and information sharing about India, further ensuring that children stay connected to their heritage.

Career-oriented learning and global competitiveness

Many NRI parents are concerned about their children's higher education and career opportunities. Online schools address these concerns by incorporating a variety of skill development classes, ranging from coding and STEM to Bharatnatyam, Carnatic music, and public speaking. They also offer foreign language courses tailored to the students' country of residence, so students can pursue their passions or develop skills according to their interests while preparing for both Indian and international universities.

Most online schools are committed to empowering students across the world with academic excellence, cultural continuity, and a student-first approach. As edtech innovations continue to reshape learning, NRI students no longer have to compromise between quality education and global mobility. They can now experience the best of both worlds—Indian education, delivered seamlessly across borders.

The writer is the founder and ceo at Vikulp Online School

In India, education without employment

Gautam R. Desiraju

is Professor Emeritus, Indian Institute of Science and Distinguished Professor, UPES Dehradun, with a citations-to-publications ratio of 102.3

Mirle Surappa

is INSA Senior Scientist at the National Institute of Advanced Studies, former Vice-Chancellor, Anna University, former Director, IIT Ropar and former Dean, Indian Institute of Science

In defending the educational policies of the present government, it has been claimed that education has been freed from the shackles of previous governments: Atal Tinkering Labs, coding right from middle school, the recruitment of Scheduled Caste/Scheduled Tribe teachers, and the empowerment of Muslim girl students. But primarily, it is stated that the National Education Policy (NEP) 2020 "will enable an educational renaissance".

In all these utterances, the seminal point that is forgotten is that our educational system remains clueless about the shape-shifting marketplace – namely, the employability of our graduates as a workforce.

Education has many purposes. It enables, it enervates and elevates. As Vivekananda said, education empowers one to stand on one's own feet. After 75 years of foolishly gambling excellence for equity, India has squandered both. Young people are unable to find meaningful employment that is commensurate with any training that they may have received. The degrees they have are not worth the paper on which they are printed.

It is irrelevant that these problems were created or ignored by the Congress pot or the Bharatiya Janata Party kettle. The present lawfully elected government has the responsibility to cleanse these Augean stables. Never mind that the NEP 2000 is the fourth such document that was supposed to do this after the Radhakrishnan Commission (1948); the Kothari Commission (1966) and the Officers' Commission (1985).

A good education is one with an optimum of depth and breadth. Depth alone imparts the technical expertise for employability. Breadth provides flexibility in a rapidly changing Artificial Intelligence-driven ecosystem, where those in the job market need to constantly re-train themselves to avoid extinction.

A high rate of educated unemployment

There is barely any evidence, four years on, that any of the NEP recommendations have been put into effect. In 2025, India's overall graduate employability rate is 42.6%, which is practically the same as the 44.3% of 2023. Similarly, knowledge-intensive employment in the year 2023 only stands at 11.72%. Multiple entries and exits, a hallmark of NEP, have only created low-quality and poorly paying e-commerce jobs.

The high rate of educated unemployment today shows that education in India is actually disempowering students. The NEP is a retreat to the Vannevar Bush model of the mid-20th century U.S. without its financial cushioning. The NEP is outdated and financially unviable in the [illegible] 2020s. While lip service paid to 'new' ideas such as Indian Knowledge Systems (IKS), mother tongue learning, changing history textbooks, flexible curricula and a complete absence of methodology to effect its recommendations, the NEP is a dead fish in the water. It depends on course choice alone to correct imbalances, notwithstanding that the course content itself may be unworkable. It is noteworthy that there was not a single member from industry or the business sectors in the committee that drafted the NEP.

The educational system is clueless about the employability of India's graduates as a workforce

A good university seamlessly integrates breadth with depth. It is claimed that there has been a remarkable improvement from the past in that 11 Indian universities are ranked in the top QS World University Rankings (WUR) 500, clearly echoing the selective narrative of Nunzio Quacquarelli, CEO of QS, who was generous in his praise of India, while releasing WUR 25. Mr. Quacquarelli quoted the 318% increase in the performance of Indian universities, as the highest growth among the G-20 nations, quietly avoiding mention of both India's low ranking (above 100) and low publication quality. To wit, India's Category Normalized Citation Impact (CNCI) rank (an indicator of publications quality) during 2008-19 which was 17th among 19 countries in the G-20, inched up admirably to 16th position in 2024. Such 'increases' have been touted by the Ministry in its Press Information Bureau press release of February 13, 2025. It has also been claimed that this is the year when Indian universities showcased the highest performance improvement among all G-20 nations. It is unbelievable that in this digital era, the government has failed to recognise and understand the commercial implications of QS, THE and similar agencies and the reasons for their skewed and deceptive analyses.

A missing transparency on projects

Mega research projects were carried out with great fanfare and amidst a media blitz in the past. These included the New Millennium project (CSIR-NMITLI), the $10 Akash tablet project, and the IMPRINT (IMPacting Research INnovation and Technology) project (MHRD).

These projects were in the limelight for years, but the public is not aware of the emergence of the intended products or processes from these projects, on which hundreds of crores of taxpayer money has been spent. It does not matter whether these projects were initiated or shut down by the Congress or the BJP. What we, as taxpayers, want to know is if these projects were value for money.

India's Global Innovation Index (GII) represents the innovation capabilities of India. Our ranks in 2014, 2015 and 2024 were 76, 81, and 39. Malaysia and Türkiye lead India in GII with ranks of 33 and 37, respectively. The GII reveals the world's top S&T clusters in two innovation metrics: published patent applications and published scientific articles. India has four clusters with ranks of 56 (Bengaluru), 63 (Delhi), 82 (Chennai) and 84 (Mumbai). The Bengaluru cluster is often touted as an unparalleled rival to Silicon Valley, particularly with respect to the numbers of startups and Unicorns. However, its 56th rank needs to be compared to the sixth-ranked Silicon Valley cluster. In terms of cluster intensity of the top 100, Bengaluru at 94 followed by Chennai at 96, Delhi at 98, and Mumbai at 99 pale in comparison to San Jose-San Francisco (Silicon Valley) at 2 and Cambridge at 1. The number of Patent Cooperation Treaty (PCT) applications per capita and scientific publications per capita for the Silicon Valley cluster are 7885 and 9211, respectively. The corresponding numbers for the Bengaluru cluster are 313 and 1077. Samsung Electronics (South Korean) is the leading patentee in Bengaluru. No further comment is necessary.

The subject of start-ups

There is no point talking about start-ups, when we do not know what they mean. Start-ups in China, the U.S. and Israel tackle semiconductor technology, how to refine rare earth elements with ecological sensitivity and how to make metformin cheaper. In contrast, our government lauds new apps that hawk food products. India cannot have start-ups without indigenous technology. It cannot have indigenous technology without indigenous science. It cannot have indigenous science without indigenous quality education, sans political agendas. Two-wheeler *kirana*s are not startups.

Contrary to the thinking of the Education Ministry, the University Grants Commission (UGC) remains an instrument of control. It always has been and there is no justification for this antediluvian organisation to have both regulatory and financial control over universities. Can the UGC present a single piece of hard data showing that changes in pedagogy and syllabus have had a positive effect? In other words, how relevant are these changes, if any, to industry, skilling, and employability? India would probably be better off if the UGC was shut down. Sitting UGC chairs, vice-chancellors, directors and ministers need not appear in national dailies peddling their policies and propaganda ad nauseam. Their job is to execute policy, not talk about it, and to ensure decent employability for the youth. It is our job, as independent academics, to write in the newspapers, if they do not do their job.

"When stupidity is considered patriotism, it is unsafe to be intelligent" – Isaac Asimov

The views expressed are personal

INDIAN EXPRESS (P-10), 15 MAY 2025

Ripples in the classroom

Changes in higher education policies in US, Canada, Australia will resonate in India

FARZANA AFRIDI

INDIA'S EDUCATION SYSTEM is severely capacity constrained. Young people comprise almost a third of the country's population, but only a quarter of them enrol in higher education. We need to increase the number of higher educational institutions or seats in existing institutions by almost five times to achieve the NEP 2020 target of 50 per cent youth with a college degree.

For the 420 million youth in the age group of 15–29 years, there are only 40,000 higher educational institutions of varying quality, with current enrolment of about 45 million students. The growth in the number of public higher educational institutions has been insufficient. Private institutions dominate the landscape of higher education, with almost 50 per cent of the universities in this sector. Although their growth has been faster relative to the public sector, that, too, has been inadequate to meet the rising demand, as per the Youth Report of MoSPI in 2021. Needless to say, with the rise in income levels and the size of the youth population, the competition for admission into high-quality educational institutions has increased in recent years. Not surprisingly, the excess demand for quality education leads to an exodus of about half-a-million youth to foreign shores every year.

Limited and poor-quality education is a potential cause of unemployment, underemployment and unemployability of India's youth. How can India increase its capacity to offer quality college-level education at home?

Recent events indicate that the world's dominant education sector is about to experience transformative shifts, with ripple effects across the globe. The US remains the largest recipient of Indian students, but the Trump administration's anti-immigrant stance is likely to have an adverse effect on Indian parents' preference for a US education for their children. In addition, the doors to foreign students are closing elsewhere with cuts on the number of student visas and other immigration policy changes, especially in Canada and Australia — two other countries high on the list of preferred destinations for Indian students.

India's large and aspirational youth population puts the country in a unique position to take advantage of the coming global shifts in the higher education industry to aggressively attract private investment as well as raise public investments in its educational institutions.

Recent events indicate that the world's dominant education sector is about to experience transformative shifts, with ripple effects across the globe. The US remains the largest recipient of Indian students, but the Trump administration's anti-immigrant stance is likely to have an adverse effect on Indian parents' preference for a US education for their children. In addition, the doors to foreign students are closing elsewhere with cuts on the number of student visas and other immigration policy changes, especially in Canada and Australia — two other countries high on the list of preferred destinations for Indian students.

With massive cuts in federal grants to US universities, along with reductions in the number of student visas or optional practical training after completion of degrees, American higher educational institutions are likely to (and are starting to) experience significant decline in foreign student enrolments. Foreign students are one of the largest sources of revenue for educational institutions in the US, Canada and Australia. These institutions will increasingly need to raise revenue resources outside the US. There are several ways in which India could attract investments by these institutions.

The government recently enacted legislation to facilitate the establishment of campuses in India by foreign universities as envisaged by the NEP 2020. However, uptake of this policy has been lukewarm so far. India needs to actively pursue high-ranked foreign universities at both the central and state levels and facilitate the process of setting up standalone campuses by facilitating land acquisition and availability of other complementary inputs.

Domestic private investments in the education sector will continue to show robust growth, but while the number of private universities has doubled between 2011 and 2020, there is a deficit of trust in the quality of most private educational institutions. This can be circumvented by setting up joint programmes with foreign universities of global repute. Foreign universities entering into partnerships with Indian universities to offer joint degrees and set up campuses in collaboration with domestic institutions should be proactively encouraged and facilitated by the University Grants Commission.

The second strategy I would advocate for is investment in the existing public institutions that have been at the forefront of offering quality education for decades and carry high brand value in the country. Unfortunately, public higher education institutions are in dire straits today, with high vacancies in faculty positions that have not been filled for years, along with crumbling infrastructure. A case in point is the stagnant faculty strength of Economics departments in undergraduate colleges in Delhi University, while Ashoka University's Economics faculty strength has grown multiple times to become the largest Economics department in the country within 15 years. This divergence indicates that there is no paucity of high-calibre candidates for faculty positions. Instead, hiring processes at public institutions have not been sufficiently adaptive. Further, public education must remain viable and effective in a relatively poor country such as ours, where the majority of students cannot afford to pay the high tuition costs charged by private educational institutions.

Expanding the capacity for quality education not only increases the human capital of the youth, it also raises youth employability while creating new job opportunities in the education sector and beyond. The education sector is one of the relatively more labour-intensive industries in India. Agglomeration economies created through education hubs have the potential to expand employment opportunities at all skill levels — from high-skilled teaching positions to mid- and low-skill providers for on-campus student services. The employment elasticity in the sector has been increasing over the years — for every 10 per cent increase in investment in the education sector, there is almost a 4 per cent increase in the number of people employed in the sector. The sector also has strong intersectoral linkages — both backward and forward — potentially stimulating expansion and job creation in other sectors such as publishing. A burgeoning education sector would, in turn, stimulate output in industries that hire high-skill graduates and thereby raise aggregate consumption in the economy. This can create a virtuous cycle of higher domestic demand, leading to higher private investments, and thereby, faster economic growth of the country.

Dynamic policymaking can ensure that India grabs this golden opportunity presented by the shifting global scenario to foster a boom in its education sector — investing in the human capital of our youth and, at the same time, creating new employment opportunities at scale.

The writer is professor of Economics, Indian Statistical Institute, Delhi, and visiting professor, NCAER

MILLENNIUM POST (P-13), 15 MAY 2025

MIND OVER MACHINE: PSYCHOLOGY'S NEXT CHAPTER IN THE AGE OF AI

DR SANKU BOSE

In the frenzy of headlines about Artificial Intelligence (AI) transforming the world—displacing jobs, writing code, composing symphonies or even visual art—it's easy to forget where it all began: the human mind. While AI might seem like the realm of coders, mathematicians, and engineers, it is, in fact, psychology that provided and continues to provide the blueprint for intelligent machines. The architecture of AI is deeply rooted in our understanding of how humans think, learn, perceive, and decide. As the next generation of AI systems pushes toward greater autonomy and emotional intelligence, psychology is not just relevant—it is indispensable!

The very birth of AI in the 1950s was influenced by psychological theories. Alan Turing's seminal question—"Can machines think?"—was as much a psychological question as a computational one. Early AI systems borrowed heavily from cognitive models, including decision trees, memory structures, and learning heuristics, inspired by how the human brain processes information. Behavioural psychology, with pioneers like B.F. Skinner, laid the groundwork for reinforcement learning—a cornerstone of today's AI systems used in robotics, gaming, and personalised recommendation engines.

Cognitive psychology, which studies mental processes such as perception, memory, and problem-solving, has been particularly instrumental. Concepts such as working memory, attention, and neural activation patterns inform everything from natural language processing to image recognition. Even neural networks—despite their mathematical abstraction—are named after the brain's own interconnected architecture. The recent explosion of generative AI owes much to the interdisciplinary efforts where neuroscience, linguistics, and psychology meet machine learning. It can safely be said that without our knowledge of human psychology, we couldn't have built the Generative Pre-trained Transformers (GPTs) that seem to have invaded every aspect of our lives today!

But the relationship is not one-way. As AI systems become more sophisticated, they open new frontiers in psychological research itself. Virtual agents and chatbots are now used in therapy, cognitive assessments, and behavioural training. AI can simulate mental health conditions for training psychologists or analyze speech and facial expressions to detect depression or cognitive decline early. Emotion AI—systems that can detect and respond to human emotions—is already being deployed in classrooms, customer service centres, and even healthcare.

Yet, there's a growing gap between academic psychology and applied AI. Most university psychology programmes remain anchored in frameworks from the 20th century, with minimal exposure to computational modelling, data science, or AI ethics. This must change— and urgently! The coming decade will demand a new kind of psychologist: one who is as comfortable reading code as conducting experiments, as fluent in GPT and transformers as in Jung and Freud.

Global trends are already pointing in this direction. The World Economic Forum's Future of Jobs Report identified psychology, behavioural science, and human-machine interaction as among the fastest-growing skill areas for the next five years. Simultaneously, jobs requiring the fusion of social sciences with AI—like AI ethicist, human-AI interaction designer, and computational psychologist—are emerging at the intersection of disciplines.

To meet this need, traditional psychology course curricula must undergo a renaissance. A foundational program should blend classical psychological theories with AI fundamentals—covering areas such as cognitive modelling, neural networks, affective computing, human factors design, and ethical AI deployment. Cross-listed courses between psychology and computer science departments should become the norm, not the exception. Crucially, training must focus not just on technical skills, but also on how to ask the right questions—a domain where psychology excels.

Several leading institutions are already integrating psychology and AI in innovative ways. Stanford's Symbolic Systems Programme blends psychology, computer science, and linguistics to explore intelligence, while MIT's Media Lab pioneers work in affective computing and human-AI interaction. At the University of Toronto, the Cognitive Science Research Community (CoRC) is combining psychological theory with machine learning and computational modelling. These models provide a blueprint for how psychology education must evolve worldwide.

Stanford's Symbolic Systems Programme blends psychology, computer science, and linguistics to explore intelligence, while MIT's Media Lab pioneers work in affective computing and human-AI interaction

There is also an urgent ethical dimension. As AI becomes embedded in decisions about hiring, healthcare, criminal justice, and education, understanding cognitive biases, decision heuristics, and emotional drivers is vital. Who better than psychologists to ensure that AI systems don't merely replicate human intelligence, but also avoid amplifying human flaws? Behavioural scientists can play a pivotal role in ensuring fairness, accountability, and transparency in AI systems.

Artificial General Intelligence (AGI), the next frontier in AI, hinges on a deeper grasp of human cognition. Building machines that can transfer learning across domains, exhibit empathy, or demonstrate creativity will require insights from cognitive development, motivation theory, and consciousness studies. Psychology, particularly cognitive science and neuropsychology will serve as the scaffolding for these breakthroughs.

The irony of our age is that as we race to build better artificial minds, we are compelled to understand the human mind more deeply than ever. The two disciplines are now entwined in a virtuous cycle of mutual advancement. If psychology gave birth to AI, then AI may just be the prodigal child that drives psychology to evolve into the future!

The author is the Group CEO of Techno India Group, a visionary and an educator. Beyond his corporate role, he is also a mentor who guides students towards resilience and self-discovery

MILLENNIUM POST (P-13), 15 MAY 2025

AI IN PSYCHOLOGY: REDEFINING THERAPY, RESEARCH & EDUCATION

Machine learning algorithms can process vast datasets to uncover nuanced patterns in behaviour, cognition and emotion that were previously too complex or time-consuming to analyse

ANINDITA ACHARYA

In recent years, AI has emerged as a transformative force in the field of psychology, reshaping how therapy is delivered, research is conducted, and future professionals are trained. By making mental health services more accessible and cost-effective, AI-driven tools like chatbots and virtual assistants are addressing long-standing barriers in mental health care. These tools can offer immediate support, monitor client progress, and even help triage cases to prioritize urgent needs.

Beyond clinical settings, AI is also streamlining administrative functions such as scheduling, documentation, and billing, thereby allowing practitioners to focus more on patient care. In training environments, AI simulations are being used to help students develop diagnostic skills, practice therapy sessions, and receive real-time feedback—an innovation that enhances both learning and supervision.

On the research front, AI is opening up unprecedented possibilities. Machine learning algorithms can process vast datasets to uncover nuanced patterns in behaviour, cognition, and emotion that were previously too complex or time-consuming to analyse. For example, researchers are using natural language processing (NLP) to study how language reflects mental health states, and neuroimaging data is being mined with AI to better understand brain-behavior relationships.

"AI is good servant but bad master. AI is transforming everything in the world so Psychology is also not untouched with this transformation. AI is renovating psychology by expanding research, advancing mental health treatment, and reimagining education. In research, AI allows faster analysis of complicated data, identifying patterns in behavior, brain processes, and emotional expression. AI helps in the early detection of mental illnesses like depression or anxiety by using facial, speech, and text analysis. In clinical care, AI-based chatbots and virtual counselors provide affordable, low-cost mental health treatment. Diagnostic tools utilize machine learning to customize treatment strategies and enhance outcomes. All-encompassing, AI is increasing the reach, accuracy, and customization of psychological science and care while posing very serious ethical issues of privacy, bias, and human judgment. Psychologists are playing a more important role in ensuring the responsible application of AI so that it increases well-being and equity across different populations," said HOD & Professor Dr. Manish Kumar Verma, Lovely Professional University.

Ongoing studies further highlight the growing trust in AI applications. For instance, Stanford University researchers have demonstrated that large language models can approximate certain therapeutic techniques, while a 2024 study in the journal Nature Mental Health revealed that AI-based tools could predict depressive episodes with over 80% accuracy using digital biomarkers.

Dr Stephen Schueller, clinical psychologist, University of California, Irvine, said, "AI is not here to replace therapists. It's here to expand access to care and enhance the quality of interventions."

Educators, too, are adapting to this changing landscape. Tools like ChatGPT are being used in classrooms to spark critical thinking, simulate counseling dialogues, and even support students with writing and comprehension challenges. Such applications are reshaping psychological education by merging human intuition with computational efficiency.

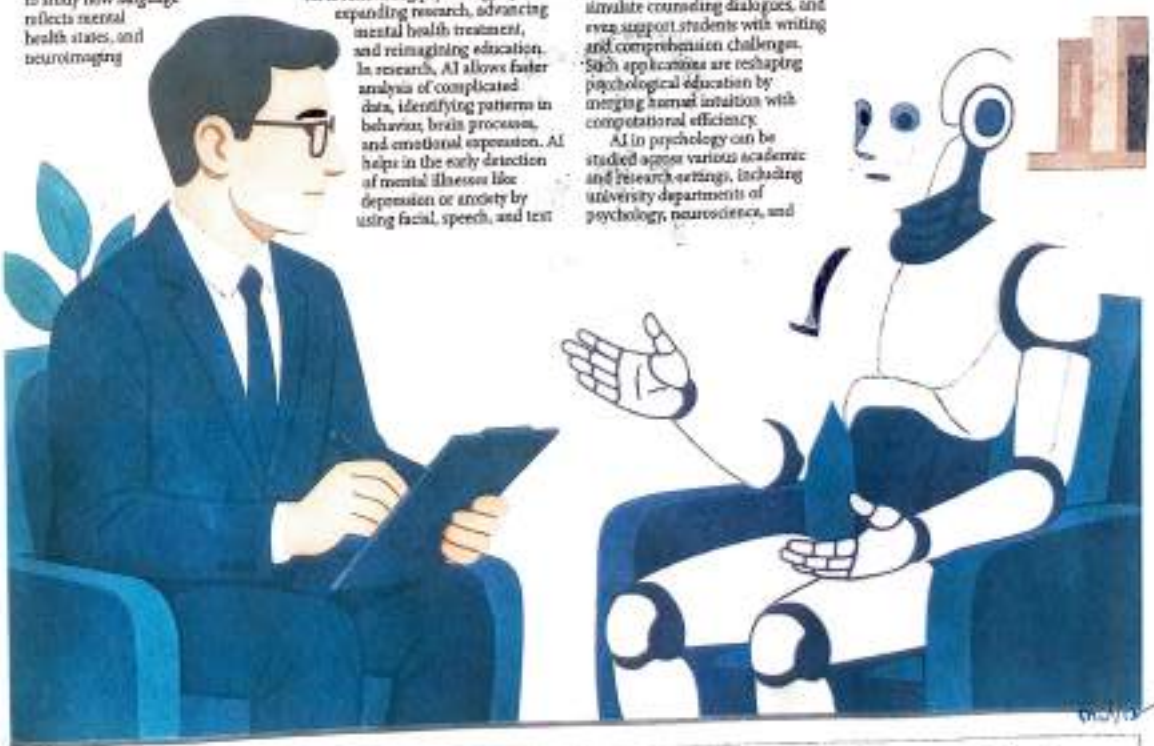
AI in psychology can be studied across various academic and research settings, including university departments of psychology, neuroscience, and computer science that offer interdisciplinary courses in artificial intelligence, cognitive science, and mental health technology. Institutions such as Stanford University, MIT, and the University of Toronto are at the forefront of integrating AI into psychological research and education. Specialized research centers like the Allen Institute for AI and the Center for Artificial Intelligence in Mental Health (CAIMH) are exploring how machine learning, natural language processing, and neural networks can be applied to understand human behaviour, diagnose mental illnesses, and develop therapeutic tools. Also, online platforms like Coursera, edX, and FutureLearn now offer courses in AI for mental health, enabling students and professionals to explore this emerging field from anywhere in the world.

Still, the integration of AI in psychology is not without challenges. Concerns about algorithmic bias, data privacy, and the potential dehumanization of care persist. These issues demand careful oversight, and psychologists are increasingly taking the lead in shaping ethical frameworks, regulatory standards, and inclusive AI design.

As artificial intelligence continues to evolve, its responsible and informed application in psychology holds the potential to dramatically enhance the quality, scope, and reach of mental health services and scientific discovery.

KEY BENEFITS

- **AI CHATBOTS** offer affordable, 24/7 mental health support
- **AI DETECTS** signs of mental illness through speech, facial, and text analysis
- **MACHINE LEARNING** accelerates psychological research by identifying behavioural patterns in large datasets
- **AI PERSONALISES** therapy plans based on individual data and response patterns
- **AI SIMULATIONS** help psychology students practice and refine clinical skills



STATESMAN (P-7), 15 MAY 2025

The paradox of student profanity

LIM WOONG

While student rulebooks routinely label swearing as a form of misconduct, the reality in today's classrooms is far more nuanced. Many teachers find it hard to address, as students often use offensive language casually — sometimes to vent frustration, sometimes to assert identity, and at times, unfortunately, to wound others. Yet research shows that swearing, when used with intent and in the right context, can have psychological benefits. It can increase pain tolerance, enhance physical performance and, in certain social settings — especially among adolescents — serve as a tool for bonding, signalling closeness and trust.

This paradox calls for a more thoughtful approach — one that helps students develop a filter for language that balances expressiveness with respect. Rather than simply policing language, educators might frame swearing as a rich linguistic and cultural phenomenon worthy of academic discussion. Doing so would allow students to explore the difference between profanity that expresses emotion or solidarity and hate speech meant to harm and incite fear or division. More importantly, they would learn how language use must vary with context. After all, becoming a mature communicator means using language strategically — something tied to voice, identity and social awareness. Language, like conduct, must fit its setting — just as sermons don't belong in clubs and screaming doesn't belong in operas.

Still, a pressing question remains: to what extent should teachers, parents or school administrators regulate student speech? In the landmark US Supreme Court case Mahanoy Area School District v. B.L., the court ruled in favour of a student who had posted a profanity-filled message on Snapchat criticizing her school's cheerleading team. The decision reaffirmed that public schools cannot punish students for off-campus speech unless it causes a substantial disruption to school activities — underscoring the enduring strength of students' First Amendment rights. At the same time, the court emphasized that much of the responsibility for off-campus behaviour properly rests with parents, not schools — highlighting the risk of overloading educators with roles they were never intended to bear.

This ruling has significant implications in the digital era. As students increasingly turn to social media for expression and community, schools must carefully balance the duty to maintain a safe and respectful environment with the legal and ethical boundaries of free expression. This points to the growing need for education in digital citizenship — curricula that address not just online manners, but also legal, ethical and civic responsibilities. Sadly, such instruction is nearly absent in Korean schools, where even basic citizenship education has been quietly sidelined.

While the law protects students' rights to express themselves, it does not absolve schools of the need to address the impact of language within the classroom. Striking the right balance between free speech and community well-being remains one of the most sensitive challenges educators face today. Attempts to stamp out profanity through punishment alone — treating it like verbal pollution or enforcing unrealistic standards of linguistic "purity" — rarely succeed and often provoke defiance or deepen disconnection.

When approached thoughtfully, even misconduct can become a teachable moment — an opportunity to guide students toward thoughtful and empathetic expression. A more constructive path lies in open, nuanced conversations about language. Students should be guided to understand why some words cause harm and how language choices shape relationships, communities and power dynamics. But if we are to take such character education seriously, school systems must evolve to value not only academic excellence but non-academic growth as well. That means holding parents socially and legally accountable when they neglect their children's emotional and moral development. It also means recognizing and rewarding civic engagement, leadership and ethical conduct alongside performance in math, science, the arts or sports. Only then can we truly say we're preparing students for life — not just for tests.

This conversation feels especially relevant in 2025 — a year that has laid bare the moral bankruptcy of many of our so-called elites. We have witnessed glaring failures in public service and ethics, particularly within the judiciary and government in Korea. Ironically, many of those implicated share a common alma mater: Seoul National University. It appears that while the university excels at instilling pride, greed and entitlement, it leaves behind moral leadership, a sense of service to others, empathy for the marginalized and the courage to stand up for justice and democratic principles with integrity.

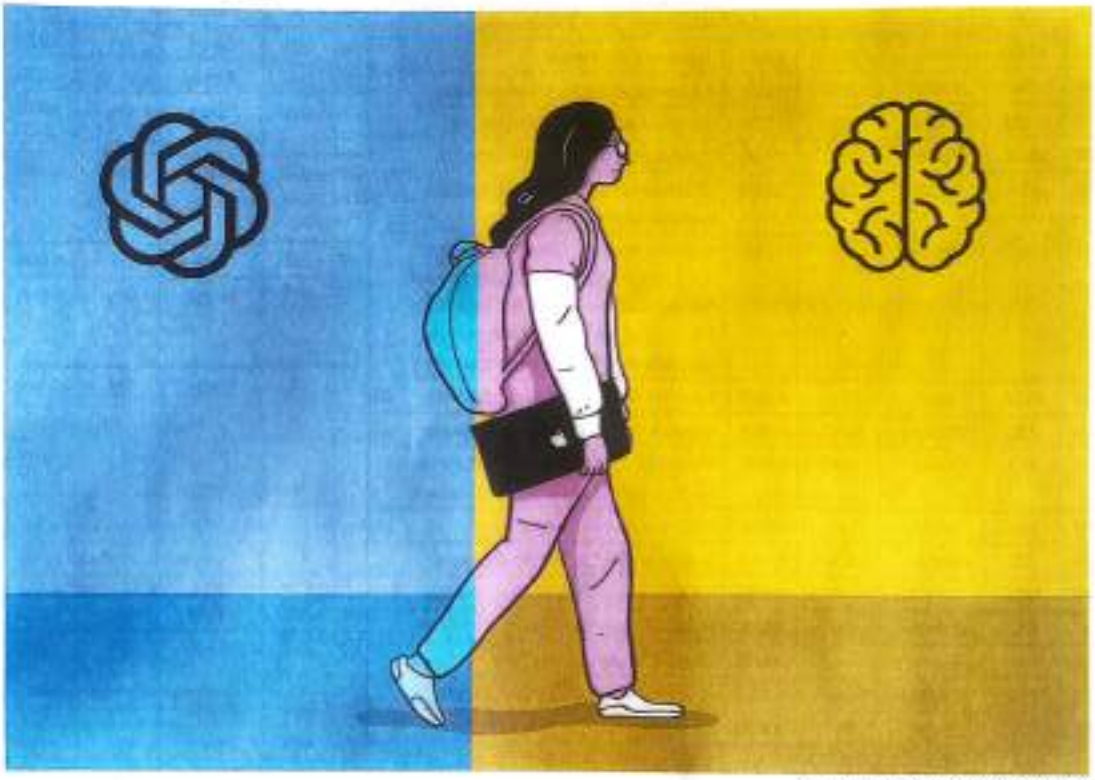
At this moment, I honestly don't know where we should begin to rebuild trust in our elite institutions or reclaim what higher education was meant to be in cultivating our nation's best minds. But I do know this: the occasional swearing of teenagers is the least of my concerns. Far more dangerous is when political leaders, public officials and judges trade justice for fear and greed, cloaking corruption in authority. Their language — steeped in hypocrisy, vanity and impunity — is the kind of profanity we should truly find unforgivable.

The Korea Herald ANN

DECCAN HERALD (P-9), 16 MAY 2025

Students call it hypocritical. A senior at Northeastern University demanded her tuition fees back. But instructors say generative AI tools make them better at their jobs

KASHMIR HILL



ON ILLUSTRATION: DEEPAK HARICHANDAN

Professors are using AI, and students aren't happy about it

In February, Ella Stapleton, then a senior at Northeastern University, was reviewing lecture notes from her organisational behaviour class when she noticed something odd. Was that a query to ChatGPT from her professor?

Halfway through the document, which her business professor had made for a lesson on models of leadership, was an instruction to ChatGPT to "expand on all areas. Be more detailed and specific." It was followed by a list of positive and negative leadership traits, each with a prosaic definition and a bullet-pointed example.

Stapleton texted a friend in the class.

"Did you see the notes he put on Canvas?" she wrote, referring to the university's software platform for hosting course materials. "He made it with ChatGPT."

"OMG Stop," the classmate responded.

Stapleton decided to do some digging. She reviewed her professor's slide presentations and discovered other telltale signs of artificial intelligence: distorted text, photos of office workers with extraneous body parts and egregious misspellings.

She was not happy. Given the school's cost and reputation, she expected a top-tier education. This course was required for her business minor; its syllabus forbade "academically dishonest activities," including the unauthorised use of AI or chatbots.

"He's telling us not to use it, and then he's using it himself," she said.

Stapleton filed a formal complaint with Northeastern's business school, citing the undisclosed use of AI as well as other issues she had with his teaching style, and requested reimbursement of tuition for that class. As a quarter of the total bill for the semester, that would be more than $8,000.

When ChatGPT was released at the end of 2022, it caused a panic at all levels of education because it made cheating incredibly easy. Students who were asked to write a history paper or literary analysis could have the tool do it in mere seconds. Some schools banned it while others deployed AI detection services, despite concerns about their accuracy.

But, oh, how the tables have turned. Now students are complaining on sites like Rate My Professors about their instructors' overreliance on AI and scrutinising course materials for words ChatGPT tends to overuse, such as "crucial" and "delve." In addition to calling out hypocrisy, they make a financial argument: They are paying, often quite a lot, to be taught by humans, not an algorithm that they, too, could consult for free. For their part, professors said they used AI chatbots as a tool to provide a better education. Instructors interviewed by *The New York Times* said chatbots saved time, helped them with overwhelming workloads and served as automated teaching assistants.

Their numbers are growing. In a national survey of more than 1,800 higher-education instructors last year, 18% described themselves as frequent users of generative AI tools; in a repeat survey this year, that percentage nearly doubled, according to Tyton Partners, the consulting group that conducted the research. The AI industry wants to help, and to profit: The startups OpenAI and Anthropic recently created enterprise versions of their chatbots designed for universities.

Generative AI is clearly here to stay, but universities are struggling to keep up with the changing norms. Now professors are the ones on the learning curve and, like Stapleton's teacher, muddling their way through the technology's pitfalls and their students' disdain.

Making the Grade

Last fall, Marie, 22, wrote a three-page essay for an online anthropology course at Southern New Hampshire University. She looked for her grade on the school's online platform, and was happy to have received an A. But in a section for comments, her professor had accidentally posted a back-and-forth with ChatGPT. It included the grading rubric the professor had asked the chatbot to use and a request for some "really nice feedback" to give Marie.

"From my perspective, the professor didn't even read anything that I wrote," said Marie, who asked to use her middle name and requested that her professor's identity not be disclosed. She could understand the temptation to use AI. Working at the school was a "third job" for many of her instructors, who might have hundreds of students, said Marie, and she did not want to embarrass her teacher.

Still, Marie felt wronged and confronted her professor during a Zoom meeting. The professor told Marie that she did read her students' essays but used ChatGPT as a guide, which the school permitted.

Robert MacAuslan, vice president of AI at Southern New Hampshire, said that the school believed "in the power of AI to transform education" and that there were guidelines for both faculty and students to "ensure that this technology enhances, rather than replaces, human creativity and oversight." A do's and don'ts for faculty forbids using tools, such as ChatGPT and Grammarly, "in place of authentic, human-centric feedback."

"These tools should never be used to 'do the work' for them," MacAuslan said. "Rather, they can be looked at as enhancements to their established processes."

After a second professor appeared to use ChatGPT to give her feedback, Marie transferred to another university.

Paul Shovlin, an English professor at Ohio University in Athens, Ohio, said he could understand her frustration. "Not a big fan of that," Shovlin said, after being told of Marie's experience. Shovlin is also an AI faculty fellow, whose role includes developing the right ways to incorporate AI into teaching and learning.

"The value that we add as instructors is the feedback that we're able to give students," he said. "It's the human connections that we forge with students as human beings who are reading their words and who are being impacted by them."

Shovlin is a proponent of incorporating AI into teaching, but not simply to make an instructor's life easier. Students need to learn to use the technology responsibly and "develop an ethical compass with AI," he said, because they will almost certainly use it in the workplace. Failure to do so properly could have consequences. "If you screw up, you're going to be fired," Shovlin said.

The Times contacted dozens of professors whose students had mentioned their AI use in online reviews. The professors said they had used ChatGPT to create computer science programming assignments and quizzes on required reading, even as students complained that the results didn't always make sense. They used it to organise their feedback to students, or to make it kinder. As experts in their fields, they said, they can recognise when it hallucinates, or gets facts wrong.

There was no consensus among them as to what was acceptable. Some acknowledged using ChatGPT to help grade students' work; others decried the practice. Some emphasised the importance of transparency with students when deploying generative AI, while others said they didn't disclose its use because of students' scepticism about the technology.

Most, however, felt that Stapleton's experience at Northeastern — in which her professor appeared to use AI to generate class notes and slides — was perfectly fine. That was Shovlin's view, as long as the professor edited what ChatGPT spat out to reflect his expertise. Shovlin compared it with a long-standing practice in academia of using content, such as lesson plans and case studies, from third-party publishers.

To say a professor is "some kind of monster" for using AI to generate slides "is, to me, ridiculous," he said.

Rick Arrowood, her professor, was contrite about the episode. Arrowood, who is an adjunct professor and has been teaching for nearly two decades, said he had uploaded his class files and documents to ChatGPT, the AI search engine Perplexity and an AI presentation generator called Gamma to "give them a fresh look." "In hindsight, I wish I would have looked at it more closely," he said.

He put the materials online for students to review, but emphasised that he did not use them in the classroom, because he prefers classes to be discussion-oriented.

The New York Times

DH 16/5

DECCAN HERALD (P-9), 16 MAY 2025

Digital education a powerful equaliser

PRATEEK MADHAV

Today, the world stands at the pinnacle of scientific, technological, and digital progress. Yet, despite these rapid advancements, millions of persons with disabilities in India continue to face significant barriers to accessing basic necessities such as education, employment, and financial services. Traditional systems remain not only physically inaccessible but also slow, inefficient, and exclusionary. As India transforms into a digitally driven economy, it is imperative to ensure that persons with disabilities are not left behind. Digital access is no longer a luxury—it is a necessity that can empower them to lead independent, dignified, and fulfilling lives.

When we speak of true inclusion, education forms the bedrock on which livelihood, empowerment, and independence are built. Despite the surge in digital learning—especially post the Covid-19 pandemic—persons with disabilities, who number nearly 1.5 billion globally, remain significantly under-represented in this expanding digital education space. While platforms like Coursera have seen widespread adoption, their usage is still largely concentrated among the able-bodied. That said, Coursera and other such platforms are working to ensure learners with visual, hearing and other impairments can succeed in courses on their platform.

GLOBAL ACCESSIBILITY AWARENESS DAY

Now imagine the transformative impact if even half of this global disabled population, over 500 million, could access digital learning. For individuals with mobility, visual, or hearing impairments, online education offers unmatched flexibility, affordability, and the freedom to learn from home and from highly reputed institutions like Columbia University. But access alone is not enough. The critical question is: Are these platforms truly accessible to everyone?

To bridge the gap, digital learning platforms must be designed with accessibility at their core—from screen-reader compatibility and captioning to visual contrast and navigation simplicity. Just as important is ensuring that learners themselves are equipped with the right Assistive Technologies (AT): screen readers, Braille displays, sign language plugins, speech recognition tools, and adaptive input devices. Inclusive digital learning is not just about reaching more people—it's about reaching all people. To ensure that persons with disabilities are not left behind in today's rapidly evolving job market, it is essential to equip them with accessible, affordable, and tailored education. With the right support, employability and livelihood naturally follow.

Employment is not merely a source of income—it represents independence, dignity, and identity. As job opportunities have shifted from traditional print media to dynamic digital platforms, digital literacy has become a non-negotiable skill. Targeted digital skilling programmes must be designed with inclusivity at their core—offering content in accessible formats such as screen-reader compatible text, sign language interpretation, captioned videos, and simplified interfaces. Assistive technologies like speech-to-text software, screen magnifiers, AI-powered voice assistants, and adaptive hardware (like alternative keyboards or eye-tracking devices) play a vital role in enabling persons with disabilities to access and engage with digital learning and workspaces.

India's digital economy, with growing investments in artificial intelligence—currently at $1.4 billion—is creating new career avenues. But without proactive inclusion, disabled individuals risk being sidelined. By providing digital and AI-related training that leverages AT, we can empower persons with disabilities to not only apply for jobs but also excel in them—fostering true economic independence and a life of dignity on their own terms.

In the financial space, due to the government's push for a less-cash economy, digital payments are thriving and evolving. Payment systems like UPI have seen a massive growth in the past few years. In 2024, UPI transactions reached a staggering 172 billion, a 46% increase from 2023. With over 14.96 billion transactions per day, UPI has revolutionised how Indians handle money. But beyond the numbers lies a deeper impact—ease of access for people with physical disabilities. No longer do they have to travel to banks, wait in long queues, or manage cheque books. UPI allows users to send or receive any amount right from their homes. For the disabled, this saves not just time and energy, but also the physical and emotional strain of navigating public spaces. When paired with assistive technologies like voice commands, and screen readers, digital payments become even more inclusive. A digital payment system is more than a mere advancement—it is a powerful equaliser.

Ultimately, beyond education and employment, persons with disabilities deserve to live with comfort and joy. Technology can and should assist in the everyday—walking, sitting, listening to music, cooking, reading, even relaxing. The goal isn't just functionality—it's happiness. Digital access, when inclusive, doesn't just solve problems. It creates opportunities.

(The writer is the co-founder and CEO of the AssisTech Foundation)

16/5/25

STATESMAN (P-6), 17 MAY 2025

Trust for science

Under threat now is the social contract between science and society. Scientists as a community must sit up and act. Science and scientists are lauded during war times – for example, most recently for drones and AI. However, we are concurrently also witnessing events that disrupt the pursuit of science. This is a cause of alarm. Without allowing unfettered pursuit and promotion of science, society will suffer, although the suffering may not be palpable in the short term

Most will remember that Katrina Kariko and Drew Weissman won the Nobel Prize in 2023 for their mRNA vaccine research that resulted in a very efficacious vaccine for SARS-CoV-2. We expressed our gratitude to them for saving many lives during the Covid-19 pandemic. Surprisingly, some weeks ago, headlines in newspapers stated "Lifesaving mRNA vaccine technology appears targeted under Trump and Robert F. Kennedy, Jr." and "Trump administration at 'war' with mRNA technology."

Science is facing an existential crisis. Trust for science seems iffy now in many countries. There is greater denial of science now than before. Consequently, the role of science and scientific knowledge in decision-making for social good appears questionable. However, those of us who believe in the relevance and power of science need to defend science without being abrasive.

Science is anchored on a set of principles. Based on experimentation, observation and logical argumentation, it generates an organized body of knowledge most of which are applicable for public good, either immediately or in the longer term.

The method of science makes its conclusions universally applicable. Practitioners of science derive conclusions on their own, obtain views on these from their peers, publish results in widely-read journals, which then are replicated by some peers.

Sometimes, conclusions need to be modified. The process is repeated until the results turn out to be broadly applicable, that is, generalizable. In non-experimental sciences, logical inferences are deduced based on observations that are designed to be free of subjectivity and bias. This nature of drawing conclusions in science makes the conclusions reliable and inclusive.

Therefore, science has played a major role in societal decision-making. There are, of course, some black sheep even among scientists – those who violate the principles and the process of science. They cause harm to science. However, they are a minority. Peers and the society punish them when their machinations come to light.

PARTHA P MAJUMDER

The writer is National Science Chair, Government of India

Science needs to be distinguished from scientists and even scientific institutions. However, at the moment some segments of societies are creating a huge confusion by putting them all in the same basket. This is resulting in the percolation of an incorrect belief that science is evil. The social contract of science is now threatened.

The relationship between science and society is dangerously being altered by certain vested interest groups, especially political groups. There is cause for alarm; we must act now. If societal-decisions are not based on scientific evidence, society will suffer irreparable damage sooner than later.

For example, mRNA vaccines have come under fire from the Trump administration because there is a belief – albeit incorrect – that the vaccines contain cells from aborted foetuses. The testing of mRNA vaccines uses cell lines; some developed from past abortions. However, the vaccines are not manufactured in cell lines and do not contain foetal cells.

Then there is a whole set of people who do not believe that anyone should get vaccinated. They believe that the immunity that vaccination provides can be gotten just by interacting with people during a period of spread of the infection.

This is called herd immunity. For herd immunity to kick in, a large fraction of a population has to become immune to the infection. This can happen if many persons are able to survive from infection naturally, but vaccination – even if an artificial method – is a more potent method to induce immunity to the infection.

Without vaccination, a large number of infected persons will die before a sufficient number of persons survive the infection because of their natural immunity. The argument against vaccination that herd immunity suffices is a weak argument; it cannot be tenable as a public health policy until one is sure that a large fraction of a population has gained immunity to the infection.

Dogmatic and geopolitical considerations – as we had witnessed in debates centred around the origin of Covid – that confused the world about the science of immunisation are deplorable. The consequences of arguments with low credibility have a long-lasting negative impact on the scientific temper of populations.

In everyday life, people not only use science, but combine a variety of knowledge derived from other sources in which they trust; these sources include religion, indigenous knowledge, culture, and the like.

The contemporary issue is the perception of science. There seems to be a distrust for science. However, from various considerations and evidence it appears that the distrust is not so much about the knowledge that science creates, but more about declaring that science is the way of life.

Under threat now is the social contract between science and society. Scientists as a community must sit up and act. Science and scientists are lauded during war times – for example, most recently for drones and AI.

However, we are concurrently also witnessing events that disrupt the pursuit of science. This is a cause of alarm. Without allowing unfettered pursuit and promotion of science, society will suffer, although the suffering may not be palpable in the short term.

Academic freedom is the key. But now this freedom is curbed in many countries, sometimes directly but often indirectly.

The nature of science to be pursued is directed by providing large research funds to some domains of science and by not providing or providing minimal funds to other domains. Scientists are now faced with the challenge of confronting this cherry-picking.

Scientists must come together and we must use our collective abilities to prevent the loss of respect and trust in science. And also reinforce the social contract between science and society for public good and as a pillar of social, economic and political progress.

The firm belief that science should value and promote diversity, equity, inclusion and accessibility is being tossed out in some countries. We should firmly protest. To protest is is not necessary to be a scientist.

As a leader of the Stand Up for Science movement has said "... we believe that science is for everyone. Everyone benefits. It doesn't matter what political affiliation you have, at the end of the day, science is for everyone," and that's why we must all fight to retain the trust for science.

DECCAN HERALD (P-11), 20 MAY 2025

Time to think beyond IITs and IIMs

Bring down the stress and achieve the same level of excellence with less hassle, writes

Ali Khwaja

After its independence, the Indian government developed many excellent educational institutions such as the Indian Institutes of Technology (23), National Institutes of Technology (31), Indian Institutes of Science Education and Research (7), Indian Institutes of Information Technology (26), Indian Institutes of Management (21), National Law Schools (26), National Institutes of Design (NID), National Institutes of Fashion Technology (18) and many more.

Despite many highly reputed private institutions and universities flourishing nationwide in the last few decades, the demand for government institutions continues to skyrocket.

Lakhs of students start preparing for 'IIT' from Class 6. Many students who do not get admission into their dream institution prefer to take a gap year and undergo extensive full-time coaching so that they can make it in the next academic year. This continues in an era when hundreds of comparable and reputed government and private colleges offer equally good education.

In fact, private institutions have the resources and funds to build better infrastructure and labs, pay high salaries to the faculty, provide very comfortable and aesthetic classrooms, set up the best libraries, and even provide high-class hostels and food. They can make extensive efforts to get the best companies to come for campus recruitment, have industry tie-ups, and pay renowned experts to come for guest lectures.

Yet the brand name and reputation of the top government-run educational institutions stand out. Graduating from such institutions opens doors for better opportunities and has prestige value. A professor from a reputed institution remarked anonymously: "We select the toppers only, so obviously our graduates turn out to be better than those from other colleges."

However, not every graduate of the most reputable institutions can perform excellently in the practical world of work, and then they start slipping.

Surveys have shown that the average work span of a fresher in his first job through campus recruitment is less than two years. So, although he secured a fancy job because of the brand value of his alma mater, after a couple of years, his market value will depend mostly on his performance in his work and the value he brings to the company.

It's not about the degree but the learning

Many young people forget that their working lifespan is approximately 40-50 years. Due to improved health care and increased longevity, most executives from the younger generation will retire around 75-80 years old. A major part of their climb up the corporate ladder will depend on how much continuous learning and upgrading they do on a regular basis, not so much on the degree they acquired before beginning their working life.

Some advantages of getting into a top-notch institution are: You have classmates who are toppers, hard-working and intelligent (much to learn from them). Teachers also tend to be outstanding because of the exposure they get. An environment of pursuit of success and widening of horizons is contagious, and you too start thinking optimistically.

Some very reputed guest faculty and industry doyens share their experiences, and so do high-achieving alumni. These and other factors help a student develop confidence, motivation, capacity for hard work, and out-of-the-box thinking, which, if nurtured properly, can last a lifetime.

Long-term benefits are not guaranteed to graduates of the top most institutions. While many reach pinnacles of glory and success, many more slip from the fast track and wallow in mediocrity. Unfortunately, no one talks about these people; only the high achievers are highlighted everywhere.

A reputed American University had one seat for a prestigious higher education course. A graduate from IIT and one from an average Indian college applied. They went through the selection process, and the second candidate made the cut.

When asked, the professor in charge of selection said that though both students' performance was more or less the same, the second one achieved that level of learning despite being in an average college, which showed that he can learn independently and excel even in adverse conditions.

Students aspiring for IITs and other hyped institutes should do a reality check. To avoid disappointment, always have a Plan B ready, i.e. other good institutions that provide almost the same level of education, which thankfully are many. This brings down the stress and pressure that lakhs of students go through and helps them achieve the same level of academic excellence without the pressure of studying in a very reputed organisation.

INDIAN EXPRESS, (P-10), 20 MAY 2025

A BANK OF INNOVATORS

More students must be encouraged to enrol in MTech and PhD programmes

T G SITHARAM

THE LATEST DATA on MTech enrolment in engineering paints a concerning picture: The numbers have hit a seven-year low. From an approved intake of 1.81 lakh in 2018–19, only about 1.3 lakh seats were offered in 2023–24, and less than 45,000 students enrolled. This means close to two-thirds of postgraduate (PG) engineering seats are lying vacant across the country. The trend is not merely statistical — it reflects a deeper malaise in the higher technical education ecosystem that policymakers, educators, and institutions must collectively address.

But first, let's understand why interest in MTech and PhD degrees is declining. Today's graduates are in a race to secure jobs as early as possible. The growing demand in industry, coupled with attractive pay packages post-BTech, makes immediate employment a more compelling option than continuing for another two years in postgraduate education. Many bright students prefer pursuing Master's or research degrees abroad, drawn by advanced facilities, higher scholarships, global exposure, and better job prospects.

A significant section of students and recruiters alike do not perceive an MTech as significantly enhancing employability or skill sets unless it is from a premier institution. For students who do consider an MTech, the financial pressure is real. The scholarship amount of Rs 12,400 per month, last revised in 2015, is no longer sufficient to cover even basic living expenses in cities. With inflation and rising costs, the scholarship is simply inadequate. For PhD aspirants, a vibrant research environment is crucial.

Unfortunately, many institutions still lack high-end laboratories, mentorship, industry linkage, and cross-disciplinary opportunities, leading to academic inertia and disillusionment. Many MTech students traditionally aspired for faculty roles in engineering colleges. However, the expansion of engineering institutions has plateaued, and job security, pay parity, and career growth in academia are no longer as attractive as before.

We have formally proposed to the Ministry of Education to increase the monthly scholarship to Rs 18,600 for GATE-qualified postgraduate students. This revision is long overdue and aligns with the 50 per cent hike given in 2015 (from Rs 8,000 to Rs 12,400). The aim is to make higher education more financially viable and reduce the opportunity cost for meritorious students.

At the All India Council for Technical Education (AICTE), we are conscious of these challenges and are actively working to implement both short-term incentives and long-term structural reforms to revive interest in MTech and PhD programmes. We have formally proposed to the Ministry of Education to increase the monthly scholarship to Rs 18,600 for GATE-qualified postgraduate students. This revision is long overdue and aligns with the 50 per cent hike given in 2015 (from Rs 8,000 to Rs 12,400). The aim is to make higher education financially viable and reduce the opportunity cost for meritorious students.

The AICTE has also recommended expanding the eligibility for PG scholarships to include students who may not have cleared GATE but have shown academic excellence with a CGPA of 8.5 or above in their undergraduate programmes from AICTE-approved institutions. This would widen access to scholarships and recognise multiple forms of merit.

In a landmark step, the AICTE is planning to include PhD programmes under its purview. This would enable us to set minimum quality standards, ensure regular evaluation, encourage interdisciplinary and applied research, and introduce robust monitoring mechanisms.

Through schemes like YASHASVI, we are continuously investing in upgrading laboratories, promoting innovation, and encouraging institutions to develop Centres of Excellence that attract both MTech and PhD aspirants. To bridge the gap between education and employability, the AICTE is working to embed industry collaboration in postgraduate programmes. Internships, live projects, industry mentorship, and co-designed curricula will help students see real-world relevance in deeper learning. Recognising that postgraduate education is a pipeline for future educators, the AICTE is revisiting pay structures, academic mobility schemes, and professional development opportunities to rejuvenate teaching as a desirable and fulfilling career path.

India is on the cusp of technological transformation — from artificial intelligence to quantum computing, from green energy to smart infrastructure. To lead in these domains, we need a strong pool of advanced thinkers, innovators, and researchers — not just entry-level professionals.

Encouraging students to pursue MTech and PhD degrees is no longer optional — it is imperative for building the intellectual and technological capital of the country. We must reshape perceptions. A postgraduate degree is not merely an academic credential — it is a gateway to depth, specialisation, innovation, and leadership. At the AICTE, we remain committed to making postgraduate and research education aspirational, affordable, and impactful.

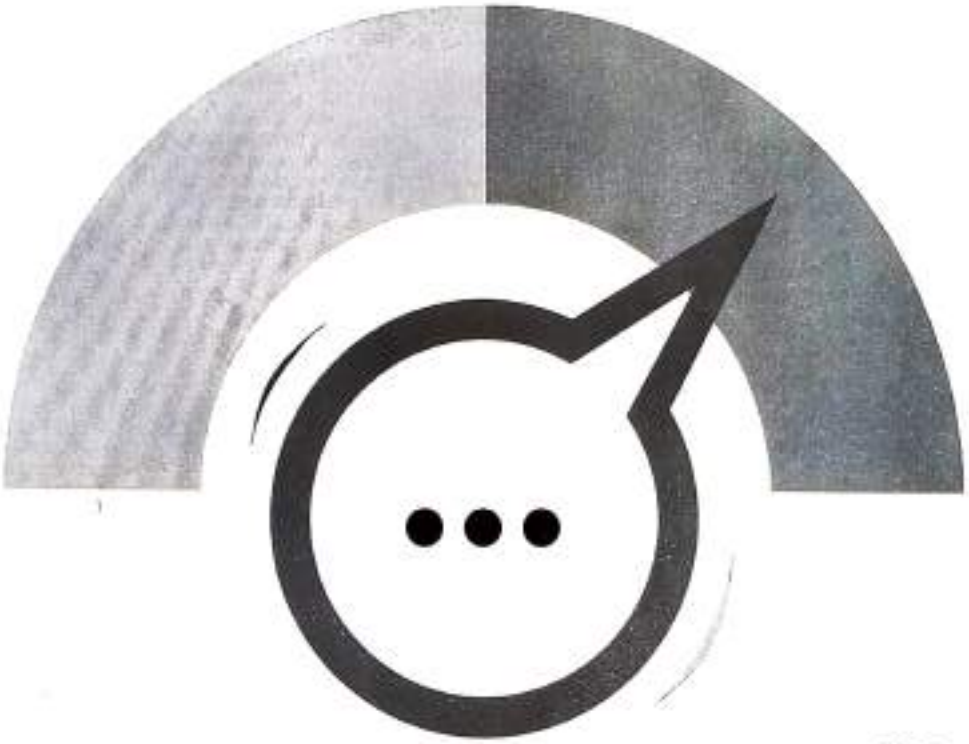
The writer is chairman, AICTE

INDIAN EXPRESS, (P-11), 20 MAY 2025

The future is bilingual

We are at an inflection point. There are stirrings, people who are not comfortable in English are now eager to join the conversation

PEGGY MOHAN



C R Sasikumar

FOR SOME TIME now, I've had a sense that India is stuck, while large parts of the world, Africa, South and Central America, East and Southeast Asia, are waking up to a new sense of turn. Not so long ago, we looked forward to a major role in the world, but that dream has dwindled. How do we regain that place? Unlike China and other modern countries, we are not firing on all cylinders. Our demographic dividend feels frustrated, excluded in a way that people in a modern nation should never be. But that may be about to change.

This year, 2025, is the year that I am seeing the most energy thrown into translation, with books originally written in English coming out in major Indian languages. This interest is new, and it doesn't look like just a whim in the heads of publishers. It seems to be coming from people who are not comfortable in English and are now eager to join the conversation, who would prefer not to turn themselves into English speakers just to engage with us. What is most exciting is that this is not government policy: It is ordinary people taking the initiative. All of a sudden, I am being asked to do talks, podcasts, and even launch my new book in Hindi, to lecture in Urdu, while I am assured that I can "mix in English" if I get stuck. I am being invited to step out of the rut of diglossia and expand the scope of our languages.

Diglossia is a kind of bilingualism where two or more languages do not duplicate each other, but play very different roles. There is a "high" language, for important things, and a "low" language for speaking to children, the poor and about things closer to the ground. You might do Maths and Science in English, but speak to grandparents, or poor people, in Hindi, or use it for inconsequential conversation. That means that someone who knows Hindi and English is not really bilingual, as there is not too much overlap between what they do in the two languages, and this makes it difficult to translate from one to the other. Instead, the two languages together make up a single competence, so much so that it is often difficult to stay in just one. Technical discussion in Hindi quickly strays into English, and as we relax our guard, our English discourse starts including bits of Hindi, words as well as phrases.

Being invited to close the gap by giving more technical talks in an Indian language is exciting, as it reduces the need for English while, paradoxically, allowing into our languages new words from English for things they were not previously talking about. We have seen this sort of moment before. The last time was in the 12th century, an age when large parts of the Subcontinent were ruled by elites who spoke prakrits and patronised literature in Sanskrit. All this time, closer to the ground, local languages were absorbing words from the prakrits, the languages of power, while the prakrits themselves stayed within the ruling class — a source of vocabulary but not really available to ordinary people. Then, as the prakrit kingdoms fell, and the modern north Indian languages emerged into the sunlight, the prakrits themselves went extinct.

This was a golden age, because new people stepped up as thinkers and inventors, ordinary people we had not been hearing from before. This was the start of written evidence of new languages, languages that might have been in gestation for a long time, messages from people whose thoughts had thus far been beyond our reach. It was by no means an egalitarian society, but something had undeniably opened. And the new languages that sprang up all over the north of the Subcontinent were a symbol of that change.

Is there a way for us to seize this moment and bring in another golden age? I think there is. And the place to do this is in the schooling system. Many government schools in Delhi now offer English-medium teaching in their A-sections. But all this really means is that teachers ask children to stand up, one by one, and read out a paragraph from the textbook in English. And then sit down. No discussion, because the teacher is not totally certain that she has understood all the fine points of the lesson, and she does not want to embarrass herself. So this exposure to English does not lead to real understanding, for teachers or for students.

What would set this right is bilingual textbooks, where everything is recapped in a language the teacher and the children know well. Once they know what it is about, they can easily discuss the lesson and clear doubts: In the home language, in English, or in a mix of both. In fact, with bilingual textbooks, things could take their own time, with technical terms slipping from English into local languages, and English becoming just a language, and not a test of everyone's self-worth. More importantly, many more children will join the conversation, children who, just from their sheer numbers, would have to include some outstanding minds.

It may come as a surprise to people nowadays to learn that one person who thought Indian 'boys' should be educated in the home language until Class 8 was Thomas Babington Macaulay. The only disruptive part of his plan was his belief that Indian 'boys' wanting to go into science should transition to English-medium schooling at that point. That may have been so in the 1830s, when the British Raj wanted Indian 'boys' to implement textbook formulas and build infrastructure and help govern the empire. But, in today's India, where we are meant to do more than 'implement', English-medium teaching is not essential even after Class 8.

It may come as a surprise to people nowadays to learn that one person who thought Indian "boys" should be educated in the home language until Class 8 was Thomas Babington Macaulay. The only disruptive part of his plan was his belief that Indian "boys" wanting to go into science should transition to English-medium schooling at that point. That may have been so in the 1830s, when the British Raj wanted Indian "boys" to implement textbook formulas and build infrastructure and help govern the empire. But, in today's India, where we are meant to do more than "implement", English-medium teaching is not essential even after Class 8. China, Japan, Korea and other modern countries manage very well with English as just another "subject", useful for when they engage with the outside world. Their schools do teach English, but not in English medium. English isn't their entry point into science.

Why am I so obsessed with using local languages, at least in primary school? It goes back to my initial point about us not "firing on all cylinders". A huge proportion of our population simply does not get to enter the modern world of science and technology. We have placed all our bets on a small elite class more interested in holding on to the status quo and accessing existing "answers" than in taking leaps and thinking laterally about a different future. We are again at an inflection point in our history when a tired "prakrit" is holding our imagination captive, while a hinterland is sitting up, curious and getting ready to play. Things will, of course, take their own course. But it is a good idea to see it all in a different light, and be ready to ride the wave when it crests behind us.

The writer has taught Linguistics at Howard University, JNU and Ashoka University. She is the author, most recently, of Father Tongue, Motherland: The Birth of Languages in South Asia

20/5/25

STATESMAN (P-11), 20 MAY 2025

Mindful, skilled, strategic

The future of hospitality education

KUNAL VASUDEVA

The word 'mindfulness' often conjures images of silence, meditation, or spiritual stillness. However, in the context of hospitality education, mindfulness is far more than a wellness trend. It is the foundation for building professionals trained to serve and equipped to lead. In today's experience-led economy, mindfulness has to be redefined as a state of heightened awareness, emotional clarity, and conscious decision-making.

Hospitality professionals operate in high-pressure, high-touch environments. They deal with unpredictability, demanding stakeholders, diverse personalities, and relentless expectations. To thrive in this space, technical training is essential. Alongside it, the ability to focus under pressure, listen with care, lead with empathy, and bounce back from difficult moments with clarity is required. These are life skills rooted in mindfulness. The time has come to build them intentionally into how we educate.

For decades, hospitality education in India has followed a linear path: functional skill development tied to operational execution. That model has value: Students need to know how to run a restaurant, manage a guest experience, or lead a service team. They must also learn to solve problems, create value, and lead diverse teams. In a world shaped by dynamic business models and global movement, hospitality education must now intersect with applied skills, life skills, and entrepreneurial capability.

Mindfulness is the glue that holds this intersection together. It helps students become more self-aware. It shapes how they engage with guests, manage conflict, respond to uncertainty, and stay composed when things don't go as planned. It also encourages reflection on what they want to build, who they want to become, and how they want to contribute to the world around them. With that level of internal clarity, education becomes a journey of transformation.

Life skills such as adaptability, resilience, collaboration, and self-regulation are essential. Every young professional entering the hospitality ecosystem today needs the ability to work across cultures, respond to ambiguity, listen with intent, and communicate with conviction. These can't be taught through textbooks or lectures. They must be experienced, practised, and reflected upon. That is where institutional environments must evolve to become spaces of immersion, interaction, and introspection.

At the Indian School of Hospitality, we have always believed that hospitality is a leadership economy. The best hospitality professionals are thinkers, builders, and creators. They understand business and behaviour, experience and empathy, operations, and innovation. They go on to become founders, intrapreneurs, strategists, and changemakers in fields ranging from travel to wellness, food to technology, and design to brand building.

That's why hospitality education should function more like a new-age business school, grounded in human-centric design, layered with real-world application, and infused with mindfulness. This is especially important in India, a country poised to become one of the world's fastest-growing consumption and experience economies. In such a landscape, the next generation of hospitality professionals will run the hospitality economy, shape guest journeys, design digital experiences, launch their ventures, and lead global teams.

We must also move beyond the belief that education is either a skill or a theory. The future requires both. Skills must evolve to include service delivery and service design. Learning must expand to integrate emotional intelligence. Application must be embedded within the curriculum through work attachments, special projects, guided experience and reflective practice.

Mindfulness, then, is not an addition to hospitality education. It is the lens through which we must view the entire journey. From classroom to kitchen, from project to presentation, from interview to industry, it shapes how students think, act, and evolve.

Hospitality is ultimately about human connection. And to teach connection, we must first teach presence. Presence in thought, action, and intent.

Education with life skills gains soul. Life skills with intent create impact. The future belongs to those who can integrate all three, with clarity, with empathy, and with purpose.

The writer is co - founder and managing director, Indian School of Hospitality

ECONOMICS TIMES (P-6), 21 MAY 2025

The Man Who Sifted Through Stardust

Prakash Chandra

In the passing of Jayant Narlikar, India has lost a visionary scientist whose pioneering work in cosmology won him world renown. An immensely popular science communicator, he was, in a sense, 'India's Carl Sagan' as he brought complex scientific concepts such as astronomy and astrophysics up close and personal to the layman. He was inarguably one of the leading lights in advancing science communication in the country, along with other giants in the field such as Yash Pal.

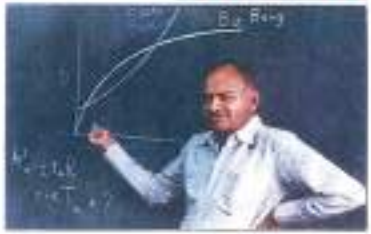
Born on July 19, 1938, in Kolhapur, Maharashtra, Prof Narlikar was an alumnus of Banaras Hindu University from where he earned his BSc degree. He later went to Cambridge to study mathematics and was awarded the Wrangler and Tyson Medal in the Mathematical Tripos. However, his passion for astronomy and astrophysics led him to a career in these subjects as fellow of King's College (1963-72), and founder staff member of Institute of Theoretical Astronomy (1966-72).

It was during this time that he met his mentor Fred Hoyle. The seminal work they did together forms an important part of modern cosmology.

Narlikar was drawn to Hoyle's theories on stellar nucleosynthesis, which explained how elements heavier than hydrogen and helium are formed within stars. This research significantly advanced our understanding of the universe's origins and the creation of elements that are essential for life as we know it. The association of these two giants of science also led to the proposal of an alternative model to the Big Bang theory of the universe's origin. Hoyle's Steady-State theory proposes that the universe has no beginning or end, and that new matter is continuously created as the universe expands. This contrasts with the Big Bang theory, which suggests the universe originated from a primordial singularity and has been expanding ever since.

Narlikar returned to India in 1972 and joined Tata Institute of Fundamental Research (TIFR), where he spent 17 years building up the Theoretical Astrophysics Group. He established Inter-University Centre for Astronomy and Astrophysics (IUCAA) in 1988 and was its founder director until 2003. Under his guidance, IUCAA gained international recognition as a centre of excellence in teaching and research in astronomy and astrophysics.

Jayant Narlikar 1938-2025



Drawing universal pictures

Although Narlikar devoted much of his time in advancing scientific thought in this part of the world, his belief in keeping an open mind to doing science always transcended the remit of scientific pursuit. He firmly believed that even the most controversial scientific views need to be investigated and not dismissed summarily just because they don't seem to 'fit' in the conventional way of looking at things.

This belief is, perhaps, most strikingly evident in his keen interest in panspermia: the theory that suggests life exists throughout the universe and is spread via space dust, meteoroids, asteroids, comets and planetoids. That this concept challenged conventional ideas about life's beginnings, proposing an extraterrestrial origin for life on Earth, never affected Narlikar's opinion about it.

It's not surprising that in 2007, when scientists openly speculated on the potential link between severe acute respiratory syndrome (SARS) plaguing the world at that time and panspermia, Narlikar's was among the loudest voices supporting the need to explore the possibility. In a letter to me, he wrote, "I think there is a lot to be explored in this [panspermia] field and the fewer prejudices we start with the better. So, I hope the panspermia hypothesis will be objectively examined rather than dismissed as rubbish."

In hindsight, it must have been more than a mere coincidence that Narlikar was echoing the belief of Hoyle who, along with astrophysicist Chandra Wickramasinghe, had significantly contributed to the theory of panspermia. In fact, Hoyle developed and promoted panspermia in the 1980s, indicating a deep and lasting interest in the origins and distribution of life, an interest he shared with Narlikar.

The universe was too vast for Jayant Narlikar to be taken for granted. He was the scientist's scientist.

The writer regularly writes on science

THE SPEAKING TREE

Intellectual Exchange

MAULANA WAHIDUDDIN KHAN

The universe of knowledge and wisdom is so vast that any single mind cannot encompass it. The only thing that can help you gain more and more knowledge is the spirit mentioned in Quran.

Knowledge is like a great ocean: faced with immensity, no one can be self-sufficient. The process of seeking knowledge must be a mutual venture, in which everyone gains something from everyone else. Everyone plays both roles.

There are several ways of acquiring knowledge, one of which is through discussion or dialogue. Discussion or dialogue is not just a debating practice but an intellectual exchange. To be fruitful, discussion requires objectivity and must be carried on in the questioning spirit of give and take.

Books are a great source of knowledge. But the study of books is not simply reading. It establishes contact and consults with other thinkers and scholars. It is like a global discussion if the reader has the true spirit and can acquire knowledge from universal sources. The library is the place for this, for it is like a global conference room. A library allows you to reach all the world's minds.

The learning process is a must for everyone and applies to both men and women. The old man is just as much in need of it as the young man. Even great scholars are no exception in this regard. One scholar has rightly said, 'Live with the spirit of learning and die with the spirit of learning.' Learning is a lifelong process. It has a beginning, but no end.

HINDUSTAN TIMES (P-16), 21 MAY 2025

Narlikar's life in science: A scientist for the people

Jayant Vishnu Narlikar passed away in the early hours of May 20, following a brief illness. He was an internationally known astrophysicist and cosmologist, but he was also a great enabler. He made it possible for hundreds of aspiring young persons to succeed as scientists, and at the same time informed and inspired the general public across the country with his talks, books, and tales, in English, Marathi, and Hindi.

Narlikar first rose to fame as a student of Fred Hoyle at the University of Cambridge in England. With Hoyle, he worked in the 1960s on a new theory of gravity and the Steady State theory of the universe. These profound ideas received a great deal of attention, and the young Narlikar quickly became well-known in the rarified astronomical circles in the UK. He received many recognitions and awards, and a Padma Bhushan at the young age of 26.

Ajit Kembhavi

Hoyle and Narlikar's ideas were interesting but controversial, and soon they appeared to clash with observations emerging from new radio telescopes, and the discovery of microwave radiation that was considered a remnant of a very hot primordial phase of the universe. Such a phase was not allowed by the Steady State theory.

Hoyle, Narlikar, and a few other distinguished colleagues, however, continued research along their lines, modifying their ideas to become consistent with the observations. These ideas could very well be important to fill gaps in our knowledge, but their last great supporter is now gone.

Narlikar could have continued to work in prestigious positions abroad, but chose to return to India and joined the Tata Institute of Fundamental Research (TIFR) in 1972. At TIFR, Narlikar established a talented group of students and young researchers who worked on astrophysics and cosmology. While he had his theories and views of the cosmos, he never imposed these on his students, who were largely free to work on problems they were interested in.

All students received equal attention from Narlikar, on whatever they worked, and under his benign yet sharp guidance, did well; a good fraction rose to positions of eminence in the academic world in India and abroad. Narlikar's work as a teacher and educator over five decades has immensely benefited many young persons who had the good fortune to be associated with him directly or indirectly or were inspired by his research and other scientific output.

Narlikar remained at TIFR until 1989 when he moved to Pune to establish the Inter-University Centre for Astronomy and Astrophysics (IUCAA). He was invited to create such a centre by Professor Yash Pal, who was then the chairman of the University Grants Commission. The aim was to develop a centre of excellence in astronomy and astrophysics at the international level and offer all facilities and expert guidance to faculty and students from universities and colleges.

The establishment of IUCAA was a turning point for science research in India. World-class research in astronomy is now done in universities all over the country. A student in Kerala or the Northeast or Kashmir can now download the latest astronomical data from any data centre in the world, use high-performance computers at IUCAA to analyse it, and work with IUCAA teachers and experts to publish their results in international journals. The university sector is now at the forefront of using Indian space observatories like AstroSat and Aditya-L1 and could very well lead future ISRO missions. Creating IUCAA has been Narlikar's seminal contribution to Indian science.

But his greatest quality was perhaps his ability to convey the most abstract ideas about the cosmos, physics, and science to the masses simply and engagingly. He did that through his many public lectures, articles in newspapers and magazines, and books in English, Marathi, and Hindi.

Generations of students have been inspired by his talks to seek higher things in life. It is not uncommon to meet a senior bureaucrat, banker, or industrialist who heard Narlikar speak and still cherishes the memory.

Narlikar was a humble and approachable person. He liked to have a routine and kept to his ways wherever he was, whatever the circumstances. He gently conveyed his ideas and opinions, but only when asked. And yet, when the occasion demanded, he could be extraordinarily firm and emphatic, particularly in defence of just causes. He could be very humorous and was found carrying books by PG Wodehouse almost to the last day. He was a great man in all ways.

Ajit Kembhavi is emeritus professor and former director, Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune. The views expressed are personal

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INDIAN EXPRESS (P-12), 21 MAY 2025

A LIFE IN SCIENCE

Jayant Narlikar challenged dominant theories, nurtured talent and made niche research accessible

IN THE EARLY 1990s, Jayant Narlikar wrote a Marathi short story, *Athenscha Plague* (The Plague in Athens), which featured a virus unleashed by an asteroid. In a fictional replay of the great Athens plague, the Greek city gets swept away. However, unlike the ancient epidemic, whose causes remain unknown, Narlikar's Athens was ravaged by a pathogen from space. A few years later, the cosmologist led an experiment to collect microorganisms from the upper atmosphere. His research suggested evidence of living matter in the stratosphere. Did some of them seed life on Earth? Narlikar counselled caution and talked of the need for more experiments. The short story and the experiment on the possibilities of microbial life outside Earth encapsulated Narlikar's approach. The cosmologist, who passed away, at 87 on Tuesday, believed in pushing the limits of possibilities. Narlikar, the writer, took readers on exploratory journeys. Narlikar, the astrophysicist, challenged dominant theories and worked assiduously to build evidence to substantiate his claims. His long collaboration with mentor and British astrophysicist Fred Hoyle produced the most significant critique of the influential Big Bang theory.

The building blocks of the Hoyle-Narlikar Quasi Steady State Cosmology theory — it contends that the universe did not originate in one Big Bang, but has existed for infinite time and has developed in small spurts — were forged when the young astrophysicist worked with his mentor in Cambridge. But Narlikar belonged to a generation of scientists such as Madhav Gadgil, Indira Nath and Venkataraman Radhakrishnan, who gave up thriving careers in renowned global labs to nurture research and hone talent in Indian institutions. The astrophysicist took up a position at the Tata Institute of Fundamental Research in 1972, where he trained scientists whose work would have a seminal influence on Indian astrophysics — they include Ajit Kembhavi, the late Thanu Padmanabhan and Sanjeev Dhurandhar. In the late 1980s, when the UGC invited him to create the Inter-University Centre for Astronomy and Astrophysics (IUCAA), Narlikar suggested that the institute be set up within an existing university. Conceived as a hub where scholars from across Indian universities could come together to brainstorm and share resources, Narlikar's most enduring institutional legacy started in a small room in the Pune University campus in 1988. However, in a few years, it expanded into a vibrant institution, equipped with state-of-the-art labs and telescopes.

Narlikar saw himself as more than an academic. He wrote scripts for TV and was a regular contributor to newspapers. The astrophysicist would often use the example of vegetable prices to explain the quasi-steady state cosmology theory — prices go up and down depending on seasons, but over a decade, they go up regardless of the season. Likewise, he would say, the universe goes through cycles of contraction and expansion, but evolves over the long term. He anticipated the predicaments of the AI age in his novel, *The Return of Vaman*, in which a machine outwits its programmer. The scientist often drew inspiration from Indian traditions — he reportedly asked architect Charles Correa to design the IUCAA campus according to Buddhist concepts. At the same time, Narlikar made it a mission to counter pseudoscience and astrology. He made science accessible while underlining that there were no shortcuts to excellence.

INDIAN EXPRESS (P-14), 21 MAY 2025

EXPLAINED SCIENCE

Narlikar's challenge to Big Bang

Jayant Narlikar and his PhD guide Fred Hoyle proposed an alternative to the Big Bang theory by modifying Einstein's general relativity and suggesting the constant creation of matter in the universe

AMITABH SINHA & ALIND CHAUHAN
NEW DELHI, MAY 20

PROFESSOR JAYANT Narlikar, one of India's most prominent scientists, passed away in Pune on Tuesday morning. An astrophysicist, Narlikar is best known for his work on an alternative model of the universe, separate from the Big Bang, in collaboration with his PhD guide Fred Hoyle, one of the leading figures of 20th-century astrophysics.

The Hoyle-Narlikar theory produced evidence to support what is known as the steady-state theory of the universe. Unlike the Big Bang theory that suggests a definite beginning, and possibly an end, to the universe, the steady-state theory maintains that the universe has always been, and would continue to be, the way it is — infinite in extent, without a beginning or an end. It acknowledged an expanding universe, which was experimentally verifiable, but proposed that the universe was able to maintain a constant density by continuously creating new matter.

The steady-state theory, mainstream in the 1950s and the 1960s, has become less popular over time, mainly because of the emergence of new evidence that better supports the Big Bang theory.

Narlikar's contribution

Born in 1938 in Kolhapur, Maharashtra, Narlikar was a young PhD student at Cambridge University in the early 1960s, when he produced a series of influential works in cosmology. He did so under the guidance of Hoyle, who had come up with the steady-state theory of the universe in collaboration with Hermann Bondi and Thomas Gold.

Incidentally, Hoyle is also the one who coined the term 'Big Bang', referring to that theory in a rather dismissive manner in a radio interview in 1948.

Narlikar entered the picture at a time when fresh experimental data produced by radio astronomer Martin Ryle, at the Cambridge University's Cavendish Laboratory, seemed to support the Big Bang theory, and provided new energy to the debate. Narlikar and Hoyle used some of Ryle's own data to show that Ryle's results were limited, and not conclusive evidence of the Big Bang theory.

The two developed their work further, and produced their famous Hoyle-Narlikar theory that promised to alter several other established theories, including gravity. Their main motivation for an alternative theory seemed to stem from a few major shortcomings of the Big Bang theory that continue to puzzle scientists even today. The Big Bang theory says the universe came into being in one single instant about 13.8 billion years ago. All matter and energy in the universe were created in that single instant, and all subsequent events are only transformations of this pre-existing matter and energy.

Professor Jayant Narlikar (*first left*) met Lal Bahadur Shastri (*second left*) during the Bharat Darshan in early 1965. *Jayant V Narlikar blogs, Musings*

The Big Bang theory is unable to explain, even today, where the matter and energy produced in that instant came from, or what happened before that. That sudden creation of the universe out of nothing has been an uncomfortable issue for a lot of scientists.

Hoyle and Narlikar instead worked to explain the steady-state theory. One of their key ideas in their hypotheses was the constant creation of new matter in the universe. This was important for the model of the universe that they proposed.

In building this model, they also sought to modify Einstein's general relativity. In general relativity, gravity arises out of local curvature of spacetime caused by heavy objects. Hoyle and Narlikar proposed that gravity at any location in the universe could also be affected by far-away objects. In a way, all the matter everywhere in the universe contributes to gravity at any given place.

In an expanding universe, the distribution of matter in the universe would change, and that would affect gravity at any given location. To keep gravity unchanged, Hoyle and Narlikar had to introduce the idea of constant creation of matter.

In his autobiography, *My Tale of Four Cities*, Narlikar himself explains how the universe can be seen as expanding steadily, while maintaining a constant density.

"To understand this concept better, think of capital invested in a bank which offers a fixed rate of compound interest. That is, the interest accrued is constantly added to the capital, which therefore grows too, along with the interest. The universe expands like the capital with compound interest. However, as the name 'steady state' implies, the universe always presents the same appearance to any observer. Such an observer, for example, can measure the density of the universe from time to time. He or she should find the universe to have the same density at all times. How is this possible, when we know that anything that expands becomes diluted and less and less dense? To answer this question, Bondi, Gold and Hoyle had to conclude that there is new matter created to make up for the diminishing density of existing matter," Narlikar wrote.

That was the reason why the steady-state theory proposed that the density of matter in the universe was constant. "It was the same, say a few billion years ago, as it is now, and as it will be a few billion years in the future. In this respect, the theory differed from its rival, the big bang theory which assumed that the entire universe that we see today came into existence in one go, through a primordial explosive creation event," Narlikar wrote.

His major contribution was in modifying Einstein's general relativity equations in a way that was consistent with the creation of new matter in the universe.

Decline of the theory

Despite the elegant mathematics that Narlikar had produced, the steady-state theory slowly lost out, with the emergence of new observations that fit the Big Bang model better. One of the most prominent discoveries in this regard was that of cosmic microwave background (CMB) radiation in 1965.

Discovered accidentally, CMB refers to the microwave radiation that fills the universe and is considered to be remnants of the Big Bang event. The Big Bang theory predicts the existence of this kind of background radiation. It also proposes that this radiation would have a uniform temperature everywhere. The accidentally discovered CMB has properties that are well aligned with the predictions.

Some other observations made later, including evidence to show that galaxies evolve, and that distant galaxies are younger and more chaotic, and some of the work of Stephen Hawking and Roger Penrose on singularities, piled more evidence in support of the Big Bang theory. They also challenged the steady-state theory.

Narlikar and Hoyle tried to address some of these challenges, but by the 1980s, Big Bang theory had emerged as the dominant explanation for the origin of the universe.

Narlikar, while acknowledging the growing evidence in favour of the Big Bang, maintained that the evidence was still not unambiguous, and was based on several unproven assumptions that were open for challenge. He considered himself amongst the minority that believed that sufficient evidence existed to re-examine the situation.

Although their big ideas have largely become out of fashion now, the work of Narlikar and Hoyle has not been discarded. The underlying mathematics was based on very sound foundations, and many of the framework and methods developed by them continue to be useful in different situations.

TRIBUNE, (P- 7), 21 MAY 2025

Narlikar and Srinivasan leave behind a shining legacy

SHYAMPRASAD KHINED
FORMER DIRECTOR, NEHRU SCIENCE CENTRE, MUMBAI

IT is with profound grief that I share the news of the passing away on May 20 of two prominent Indian scientists — Dr Jayant Narlikar and Dr MR Srinivasan. Dr Narlikar was 86 and Dr Srinivasan 85. Nehru Science Centre, of which I was the Director, had the honour of hosting lectures of both these scientists.

Dr Jayant Vishnu Narlikar was an eminent scientist in astrophysics and cosmology. He was also a great science communicator, including in Marathi. Dr MR Srinivasan was one of the founding members of the Atomic Energy Commission. He worked with Dr Homi Bhabha and also served as Chairman of the Atomic Energy Commission and Secretary, Department of Atomic Energy (DAE).

As we mourn their loss, it is also a time to reflect on and celebrate their life of extraordinary intellect and their contributions to our nation.

Dr Narlikar's contributions to theoretical astrophysics, his role in nurturing scientific talent in India and in the establishment of the Inter-University Centre for Astronomy and Astrophysics (IUCAA), a globally acclaimed institution, and his efforts to make science accessible to all will continue to inspire generations.

Narlikar was born in Kolhapur, Maharashtra, on July 19, 1938. He received his early education at Banaras Hindu University (BHU), where his father was Professor and Head of the Department of Mathematics. Young Jayant Narlikar had a brilliant career in school and the intermediate. He obtained his BSc degree from BHU in 1957.

Narlikar opted to pursue his higher studies at the Cambridge, UK. He was a Wrangler and Tyson Medallist in the Mathematical Tripos at Cambridge, from where he obtained his degrees in mathematics: BA (1960), PhD (1963), MA (1964), and ScD (1970). He also distinguished himself at Cambridge with the Smith's Prize in 1963 and the Adams Prize in 1967. He stayed back there till 1972 as a Fellow of King's College (1963-72) and Founder Staff Member of the Institute of Theoretical Astronomy (1966-72).

It was during this period that Dr Narlikar laid the foundations of his research work in cosmology and astrophysics in collaboration with his internationally acclaimed mentor, guide and collaborator, Fred Hoyle. One of Dr Narlikar's most significant contributions is his development of the "Hoyle-Narlikar Theory", also known as the "Quasi-Steady State Cosmology/QSSC". This cosmological theory proposes an alternative explanation for the origin and evolution of the universe, challenging the widely accepted Big Bang theory of that time.

Dr Narlikar returned to India in 1972 to join the Theoretical Astrophysics Group at the Tata Institute of Fundamental Research (TIFR), where he served for 17 long years. This group, under the leadership of Dr Narlikar, expanded and acquired international standing for TIFR in the field of theoretical astrophysics, which TIFR continues to enjoy even today.

In 1988, Dr Narlikar was invited by the University Grants Commission (UGC) to set up the IUCAA as its Founder-Director.

He was a recipient of the Bhatnagar award as well as of the MP Birla award, the Prix Janssen of the French Astronomical Society and the prestigious Associate of the Royal Astronomical Society of London. He was a Fellow of the three national science academies as well as of the Third World Academy of Sciences.

For his stellar contributions to science communication and popularising science, Dr Narlikar was honoured by the UNESCO in 1994 with the prestigious Kalinga Award. Dr Narlikar was conferred the Padma Bhushan award by the Government of India in 1965 and the Padma Vibhushan in 2004. In 2011, the Maharashtra Government awarded him the state's highest civilian award, the Maharashtra Bhushan.

Dr Narlikar served as the Chairman of the Executive Committee of the Nehru Science Centre, Mumbai. I have had the honour of heading the Centre for two terms.

MR Srinivasan was born on January 5, 1930 in Bangalore. He was one of the towering personalities who ably guided the Indian nuclear programme. He completed his mechanical engineering from the UVCE, Bangalore, in 1950. He did his masters in fluid mechanics, heat transfer and applied mathematics and his post-graduation in gas turbines and acquired a doctorate from McGill University, Canada.

Dr Srinivasan was handpicked by Dr Homi J Bhabha to work for the DAE. He joined the DAE as senior research officer in September 1955. He was deputed to the UK Atomic Energy Authority for an international course in reactor technology at Harwell. His first assignment with the DAE was to work with the group responsible for the construction of the first research reactor of Swimming Pool Type, later named Apsara.

In 1959, a project group was constituted for setting up the first nuclear power plant. Dr MR Srinivasan was the principal project engineer of a boiling water reactor of US design at Tarapore.

In early 1967, he was appointed as the chief construction engineer of the Madras Atomic Power Project. It was the first indigenously designed pressurised heavy water reactor based on CANDU technology. The construction work at the power station involved many new and challenging techniques in civil engineering.

He was made the Chairman of the Nuclear Power Board, DAE, in 1984. Dr MR Srinivasan served as Chairman of the Atomic Energy Commission from 1987 until his retirement in February 1990. He hastened the process of setting up the Nuclear Power Corporation of India, which was created in September 1987, with Dr Srinivasan as Founder-Chairman.

In 1984, he was awarded the Padma Shri, the Padma Bhushan in 1998, and the Padma Vibhushan in 2013. He is the author of the book, 'From Fission to Fusion: The Story of India's Atomic Energy Programme' (Viking Penguin, 2000).

Dr MR Srinivasan has also written extensively in the print media on the significance of the development of nuclear energy for India's energy mix and has appeared regularly on TV programmes to engage on nuclear issues and nuclear safety.

Nehru Science Centre, Mumbai, had the honour to host him for the Homi Memorial Lecture on February 25, 2018, when he was 88.

Rest in peace, Dr Narlikar and Dr Srinivasan. You both will ever be remembered.

SCIENCE LUMINARIES: (Left) Dr Jayant Narlikar was an eminent astrophysicist and cosmologist. (Right) Dr MR Srinivasan served as Chairman of the Atomic Energy Commission. NEHRU SCIENCE CENTRE

> Dr Narlikar was a great science communicator, including in Marathi. Dr Srinivasan was one of the towering personalities who ably guided the Indian nuclear programme.

MILLENNIUM POST (P-7), 22 MAY 2025

NEXUS OF GOOD

Data-driven Diagnosis

Through early intervention, seamless referrals, and coordinated approach, the Digital School Health Programme in Dadra and Nagar Haveli is revolutionising child healthcare

ANIL SWARUP

THE WRITER IS AN AUTHOR AND A FORMER CIVIL SERVANT

The Digital School Health Programme fosters proactive healthcare model that empowers educators, healthcare professionals, and policymakers to customise national programmes

Health-related data is critical for a healthy existence. The evolution of technology has made this task easier. In this context, the initiative taken in Dadra and Nagar Haveli to capture health screening data from the last two academic years through the use of technology is a commendable one. This is being accomplished through the Digital School Health Programme.

The Digital School Health Programme is designed to streamline health services, providing an integrated platform for healthcare professionals, including field-level functionaries and officials of the Education Department and Women & Child Development Department, to manage their responsibilities more efficiently. With its user-friendly interface and integration with other national health programmes, it has significantly improved child healthcare management, the referral system, and follow-up. This initiative fosters a data-driven, proactive healthcare model that empowers educators, healthcare professionals, and policymakers to customise national programmes based on priority.

Health records in manual form posed many challenges. Such records were not maintained properly; the data collected was inaccurate, insufficient, and was never linked with the HMIS. The exercise of entering data was repeated in new manual forms, with no relation to the previous year's data. Referrals and follow-ups remained incomplete. The data captured by the Health Department was rarely shared with the Education Department, WCD, or even parents. The parents of schoolchildren were never involved in the entire process. Sharing the data with national portals used to be difficult, and there wasn't any support in making policy interventions.

The Digital School Health Programme was implemented through a structured, multi-phase approach. In the first phase, the digital health portal/app was designed to capture comprehensive health data comprising the 4 Ds (Diseases, Defects at birth, Deficiency, Developmental Delay) during the screening of all children aged 0-18 years. In the second phase, integration with HMIS and national portals of Health Departments, UDISE of the Education Department, and Poshan Tracker of the Women & Child Development Department was taken up for seamless data consolidation.

The programme portal was developed by the National Informatics Centre (NIC). The target beneficiaries were children aged 0-18 years who attend anganwadis and schools. Training and capacity building of all healthcare professionals, including field-level functionaries, was conducted along with staff from the Education Department and Women & Child Development Department. ABHA IDs were created for the entire target group, and unique reference numbers for children were generated to ensure no child missed health screening even when transferring from one school to another. A real-time dashboard enabled tracking of interventions and was made available to all concerned departments for ensuring referrals and follow-ups.

The initiative impacts almost one-third of the population by creating individual health data that can be retained over time. REPRESENTATIONAL IMAGE

Separate logins were created for all stakeholders from the three departments and also for parents. Logins for medical officers, field-level functionaries of the Health Department like ANMs, ASHAs, and concerned Medical Officers of their respective jurisdictions were created, along with similar logins for school teachers and anganwadi workers. Similarly, data on Anaemia-Mukt Bharat and IFA tablets are being updated on the portal on a real-time basis.

The key highlights are:

- 100 per cent screening of children aged 0-18 years is done, and the data is captured digitally.
- The entire anthropometric data (height, weight, and BMI) and 4Ds is on the portal and is accessible to policymakers and field-level functionaries of the health, education, and social welfare departments.
- Individual health cards can be digitally downloaded and shared with the parents.
- Separate logins for parents, teachers, and all the field-level functionaries of the health department have been created.
- The ABHA ID has been generated for all children aged 0-18 years.
- The digital health programme portal has been integrated with the UDISE portal so that no child is left out, even if she gets transferred from one school to another.
- The digital health programme portal has been integrated with HMIS and also with the national portals of the health department for seamless data transfer.

The programme ensured effective screening and identification of unhealthy children in the age group of 0-18 years. All unhealthy children were referred to respective institutions. This helped in early intervention and treatment. More than 95 per cent of the referred cases have been cured, while the remaining 5 per cent are currently undergoing treatment. The programme resulted in a significant decrease in the prevalence of malnutrition, proving the effectiveness of digital health interventions. There is a significant drop in malnutrition cases (around 80 per cent among SAM and MAM cases) compared to 2023. Early identification, complete referral, and regular follow-up helped in treating more than 95 per cent of 4D cases. The entire loop of child health management is tracked digitally. Integration with HMIS and national portals has further helped in the management of child health.

The Digital School Health Programme successfully bridged the communication gap between three departments: Education, WCD, and Health, ensuring effective screening and early identification of the 0-18 years population. The initiative impacts almost one-third of the population by creating individual health data that can be retained over time. All stakeholders at different levels can access the data required for their respective roles, thereby ensuring the sustainability of the programme. Integration with ABHA ID, national health programmes, UDISE, and HMIS has helped in early intervention, referrals, and follow-up. A digital copy of the health data (health card) can be sent to the parents' mobile number and can also be downloaded from the portal using their login ID. This has helped the UT administration to customise health programmes as required and to effectively target the identified beneficiaries.

This wonderful initiative, under the leadership of the young IAS officer Arun T, can be easily replicated in the true spirit of the Nexus of Good through coordination among various stakeholders and public-private partnership.

Views expressed are personal

MILLENNIUM POST (P-13), 22 MAY 2025

JUSTICE IN THE AGE OF AI: CHALLENGES & OPPORTUNITIES

DR SAMEER BOSE

The legal profession, traditionally very cautious in its approach to change, now finds itself at a crossroads shaped by rapid advances in AI. From automating routine legal tasks to influencing judicial decision-making, AI is poised to transform not only how lawyers practice but also how justice itself is administered. This transformation, while still in its early stages, is already prompting significant reflection across courts, law firms, regulators, and academic institutions.

AI has made considerable strides in augmenting legal workflows. Tasks that once consumed countless billable hours—document review, legal research, and contract analysis—are now increasingly handled by AI-powered platforms. Tools such as Harvey (developed in partnership with OpenAI), Casetext's CoCounsel, Lexis+ AI, and ROSS Intelligence employ NLP and ML to extract insights from vast repositories of legal information. They can identify relevant precedents, flag inconsistencies, and even draft first-level contract language. As a result, the role of the lawyer is shifting from that of primary researcher to that of strategic advisor and quality controller.

The McKinsey Global Institute estimates that approximately 23% of a lawyer's workload could be automated using existing AI technologies—a figure that is expected to increase as AI becomes more sophisticated and context-aware. While this may initially be seen as a threat to traditional roles, in practice it is leading to a reallocation of legal expertise towards more complex, judgment-intensive tasks.

AI is also beginning to influence judicial decision-making. In the United States, the United Kingdom, and China, risk assessment algorithms are used to inform bail and sentencing decisions. In Estonia, always pushing the boundaries of technology, a pilot project introduced AI to resolve small-claims disputes. However, these developments raise pertinent ethical and procedural questions. To what extent should judges rely on algorithmic recommendations? How can the legal system ensure transparency and accountability when such tools are used?

Such concerns are not unfounded. AI systems trained on historical legal data may perpetuate existing biases, leading to outcomes that are statistically consistent but ethically problematic. The "black box" nature of many AI models—wherein the rationale behind an output is opaque—poses a serious challenge to principles of due process and judicial reasoning. Addressing these risks requires robust regulatory oversight and clear frameworks for the responsible use of AI in legal settings.

Efforts to develop such frameworks are already underway. The European Union's proposed Artificial Intelligence Act designates the use of AI in judicial and law enforcement contexts as "high risk," mandating stringent standards for transparency, human oversight, and data governance. In India, the Supreme Court has constituted an AI committee to examine the responsible integration of AI tools to court administration and case management.

For the legal profession, AI is not merely a new technology; it is a new competitor. Law firms are investing heavily in digital transformation, and legal technology is now a growing area of practice. Clients increasingly expect lawyers to be conversant with the tools that can deliver faster and more cost-effective legal services. As a result, legal education must evolve in tandem.

Yet, most law schools continue to operate within a traditional framework, often treating technology as peripheral to the core curriculum. This is no longer sustainable. Institutions must integrate AI, data science, and ethics into the foundational training of legal professionals. Courses on algorithmic governance, predictive analytics, and the legal implications of emerging technologies should become part of mainstream legal education.

Some institutions are leading this shift. Harvard Law School now offers integrated courses on AI and law to its students. The National Law School of India University (NLSIU) has initiated discussions on integrating AI into legal pedagogy. Such efforts must be expanded and formalized. Interdisciplinary programs—combining law, computer science, and public policy—can produce graduates capable of shaping both the technological and legal architectures of the future.

Harvard Law School offers integrated courses on AI and law. The National Law School of India University has initiated discussions on integrating AI into legal pedagogy

Looking ahead, the legal system of the next decade will likely be characterised by hybrid workflows. AI will increasingly handle tasks such as discovery, legal drafting, and even preliminary adjudication in administrative or small-claims contexts. Judges will continue to be the final arbiters in complex and value-laden matters, but their work will be informed—and in some cases challenged—by algorithmic insights.

However, amid these advances, it is imperative to recognise that the legitimacy of legal systems rests on human judgment, procedural fairness, and moral reasoning—values that cannot be delegated to machines alone. AI, no matter how advanced, must serve as a tool to enhance, not replace, the human pursuit of justice.

The coming years will test the profession's ability to harness technological innovation while safeguarding the principles at the heart of the rule of law. This will help shape a legal system that is more efficient, inclusive, and responsive to the needs of a digital society. However, AI must always remain a tool to expedite justice, guided by human wisdom and ethical scrutiny.

The author is the Group CEO of Tribes India Group, a visionary and an educator. Beyond his corporate role, he is also a mentor who guides students towards holistic growth and self-discovery.

MILLENNIUM POST (P-7), 23 MAY 2025

UNPLUGGED LOOPHOLES

A Double Dilemma

India's interrelated fight against corruption and unemployment is crucial for inclusive growth, as systemic graft cripples job creation, erodes public trust, and wastes its youth potential

DEBASISH SUR & MANIK CHAKRABARTY

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In urban India, nearly 10 per cent of youth aged 15–29 are unemployed. Among graduates, the rate is even higher—approximately 18 per cent

India, with 1.4 billion people and the world's fifth-largest economy, faces two deeply intertwined challenges—corruption and unemployment. These issues not only impede economic growth but also undermine public trust and frustrate youth aspirations. This article examines how corruption hinders job creation and explores reform strategies drawn from national and global best practices. Addressing corruption is crucial to unlocking India's demographic potential and ensuring inclusive development

Introduction

India presents a paradoxical narrative: a rising economic power with robust technological innovation, yet burdened by persistent corruption and widespread unemployment. These issues are not independent; they are mutually reinforcing. Corruption diverts resources, distorts public recruitment, and hampers investment, while unemployment breeds disenchantment and fuels informal, corrupt practices.

The Mirage of Progress

While the official unemployment rate (Periodic Labour Force Survey) for 2023–24 stands at a modest 3.2 per cent, a deeper examination reveals a more alarming scenario. In urban India, nearly 10 per cent of youth aged 15–29 is unemployed. Among graduates, the rate is even higher—approximately 18 per cent—indicating a severe mismatch between education and market demand. In states like Kerala, over 30 per cent of graduates are without work despite high educational attainment. Similarly, Haryana reports an urban youth unemployment rate of 23.4 per cent. These figures call into question the efficacy of current educational and employment frameworks. Women face compounded challenges. Although female labor force participation has risen to 41.7 per cent, rural women predominantly engage in low-paid agricultural work. Urban women, despite being more educated, contend with wage discrimination and safety concerns. The economic system fails to convert their labor into meaningful livelihoods.

Corruption significantly inhibits job creation in any given economy

Corruption: The Silent Job Killer

Corruption significantly inhibits job creation. India's ranking of 96 in the 2024 Corruption Perceptions Index reflects systemic governance failures. Public programmes meant to provide employment are often hijacked by corruption at multiple levels. For instance, the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is frequently manipulated. In Bihar, thousands of fraudulent job cards have surfaced, diverting funds from real beneficiaries. Aadhaar-based payments, meant to increase transparency, have inadvertently excluded 34 per cent of women in some regions due to faulty biometrics and poor connectivity. Corruption in public sector recruitment is another dark spot. From the Vyapam scam in Madhya Pradesh to the more recent West Bengal School Service Commission (WBSSC) recruitment scandal, bribery and favoritism have eroded public trust. Qualified candidates are left unemployed while positions go to the highest bidders, undermining meritocracy and pushing thousands of capable youth into despair. Similar malpractices in railway and state-level exams have further demoralised the youth. Infrastructure, a traditional driver of employment, has also been impacted. The Mumbai-Ahmedabad Bullet Train project, a flagship initiative, remains stalled due to land acquisition controversies. Overall, ₹5.71 lakh crore is locked in 458 delayed projects, denying employment to thousands. Skill development programmes are similarly compromised. In Uttar Pradesh, the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) has witnessed fraudulent enrollments and substandard training. Only 18 per cent of participants have secured formal jobs, highlighting systemic inefficiencies.

The Ripple Effect

The consequences of corruption transcend economic dimensions. Institutional credibility suffers, deterring both foreign and domestic investment. In 2023–24, FDI declined by 22 per cent as investors reacted to India's uncertain and often opaque regulatory environment. Entrepreneurs face a convoluted system of approvals and unofficial payments, discouraging innovation. The manufacturing sector, essential for absorbing labor, grew by a mere 3.4 per cent, inadequate for the 12 million youth entering the workforce annually. This stagnation breeds disillusionment. Surveys indicate that 65 per cent of Indian youth aspire to emigrate, citing lack of meritocracy and limited opportunities. Social media platforms echo these frustrations, with hashtags like #JoblessIndia reflecting a growing sentiment of despair.

Reimagining the Future

Addressing this dual crisis requires systemic reforms, not superficial ones.

1. Institutional Integrity and Legal Enforcement

Karnataka's Anti-Corruption Bureau, which achieved 83 convictions in 2023, exemplifies effective enforcement. Expanding such models across India, with empowered Lokpal and Central Bureau of Investigation (CBI) bodies, is essential for restoring public trust.

2. Leveraging Technology

Technological interventions offer scalable solutions. Andhra Pradesh's Real-Time Governance initiative reduced tender processing delays by 40 per cent. Telangana's AI-driven audits saved ₹1,200 crore in public funds. National-level digital dashboards for welfare tracking could enhance transparency and reduce pilferage.

3. Community Participation

Rajasthan's social audits recovered ₹220 crore from MGNREGA-related fraud, demonstrating the effectiveness of citizen oversight. Kerala's grievance redressal portals, resolving 85 per cent of public complaints, highlight the importance of responsive governance.

4. Ethical Private Sector Engagement

Tata Steel's operations in Odisha created 8,000 jobs through sustainable mining practices. MSMEs, supported by transparent digital credit systems, accessed ₹1.5 lakh crore in loans. Offering tax benefits for ethical business practices can promote a culture of integrity.

5. Education-Industry Linkages

Successful models, such as the collaboration between IIT Bombay and Siemens AG, have achieved 80 per cent placement rates in automation roles. Expanding apprenticeship programmes, modeled after Germany's dual education system, could provide hands-on training to 1.2 million youth annually.

The Clock is Ticking

India's demographic dividend, with 65 per cent of the population under 35, represents a massive opportunity—but only if channeled correctly. The 2024 general elections showed that youth are growing impatient; 62 per cent identified unemployment as their top concern. Yet, hope persists. International examples—from Estonia's e-governance to Rwanda's anti-corruption courts—demonstrate that transformational change is achievable. India must recognise that corruption is more than a legal violation; it is the systematic theft of its people's future. Eradicating corruption and creating meaningful employment are not parallel goals—they are interdependent. Only by tackling both can India unlock a future where development is not a privilege, but a right for every citizen.

Views expressed are personal

TELEGRAPH (P-10), 23 MAY 2025

FIRST STEP

Creating an academic destination for foreign students requires certain conditions. The University Grants Commission has instructed higher education institutions to add up to 25% of supernumerary seats over their sanctioned total exclusively for foreign students. This is a first step because overseas candidates studying undergraduate and postgraduate courses need to be accommodated apart from students from within the country. Simple and transparent admission processes and a student-friendly atmosphere could gradually turn India into an international academic hub as envisaged by the National Education Policy, 2020. To streamline the process, the UGC has asked for dedicated offices for foreign students and the notification of programmes, fees and eligibility criteria on the HEIs' websites.

But increasing seats and easing admission alone cannot magically transform India into a global academic destination. The UGC's suggestions seem to overlook the challenges that Indian universities and colleges are mired in today. In a country where HEIs often lack adequate infrastructure, research facilities and teacher strength as things stand, encouraging foreign students in extra seats may not be easy. This is especially important for research and professional degrees. Another important necessity is the standard and size of laboratories. Only a few HEIs can boast of laboratories which are as alluring as overseas ones. All institutions must have modern, well-run residence halls too. As for a student-friendly atmosphere, the suppression of student protests in the South Asian University, which takes in foreign students, and the violence on campus over non-vegetarian food served in a mess on Mahashivaratri, to cite a few examples, do not augur well. What is needed is a change of mindset — a hospitable atmosphere and an acceptance of diversity. Another challenge is the lack of autonomy that HEIs suffer from or the ideological compliance with one political party that their administrations exhibit. The university courses must be attractive and superior enough to make a degree from India valuable. For that, each institution must build on its core competencies. There should be a rational freedom in faculty selection and the fixing of fees for foreign students as is the case in some HEIs elsewhere. Increasing seats by 25% with no financial backing is not practical. It is best to take the UGC's prompting as a first step and prepare the ground for the change. The challenges must be addressed before the project takes off.

ECONOMICS TIMES (P-6), 24 MAY 2025

BUILD STEMPUNK CITIES

Kaushik Sanyal

On a different ivy league: Students of Nanjing University

My daughter, who is completing high school, has expressed interest in continuing her education in the biotech space at college level and beyond. While researching the top institutions globally in this space, I was surprised to see a plethora of Chinese universities dominating the rankings. As I looked through other STEM areas, the same pattern emerged — if not accentuated — with much larger presence of Chinese universities, especially in areas of computer science and AI.

I recollected a conversation with a professor-friend of mine in the US, who had been tracking Chinese research output. He had told me that over the past 20 years, output from Chinese universities in STEM has been continuously exceeding that from the US.

For a country that still gets lampooned in international media for 'cheap copy' or 'substandard product', increasingly innovative capabilities in social media like TikTok, or in AI like DeepSeek and Manus, are stunning the world. China's dominance in solar cell manufacturing and EVs is already well known.

So, how did China make it happen? Project 985, conceptualised in 1998 by the Jiang Zemin administration, selected 39 universities for increased investments to make them 'world-class'. The results are now showing. Focus on the number of universities has since gone far beyond the original 39. Ecosystems are forming around chosen universities similar to ones created in areas like Boston and Bay Area in the US.

Instead of trying to convert individual universities as islands of excellence, identify cities that could become hubs of AI, quantum computing, biotech and climate tech

India responded to the looming challenge in its 2016 budget by identifying 20 universities across private and public sectors in which GoI was willing to invest significant sums to make them 'world-class'. After the initial hullabaloo over the selected private universities, not much discussion about investments or their impact has been made in the public space.

While having many interesting ideas, India's next important effort around education through National Education Policy (NEP) 2020 has been stuck in 'debates' over matters like 'imposition of Hindi' and 'central interference'. Here, too, the results show. While there was much joy in Kolkata for pipping Bengaluru as India's top research hub in the prestigious Nature Index 2024, the former was ranked 84th and the latter 85th among 200 science cities across the world. Beijing topped the list, followed by Shanghai, New York, Boston and Nanjing. Five Chinese cities were in the index's top 10 (compared to four American cities).

Can a democratic, diverse India respond in the same way to China's top-down, centralised approach to higher education excellence? Probably not. To achieve success, India should consider two things:

- Instead of trying to convert individual universities as islands of academic and research excellence, India should look to identify *cities* that could become hubs of subjects like AI, quantum computing, biotech and climate technology. Each of these areas could be looked at from all angles including — but not limited to — research and innovation, while expanding to consider its impact from areas like IP and legal issues, looking at commercialising these innovations, or even studying its impact across societies.

Indian cities are blessed with good academic institutions that can be leveraged to create talent across key futuristic areas by creating excellence in one area to start with. They can then become hubs of talent providing 360° perspectives across innovation, commercialisation and consulting, which a single-minded vision around research in an undemocratic monolithic society like China's cannot.

- Given the Trump administration's unprecedented assault on its higher education system — the threat to shut down Harvard's foreign enrolment being the latest, even as it was blocked for the time being by a federal judge on Friday — India is the only large democratic country with both the ability and the willingness of its population to absorb institutions and academics seeking a safe haven outside the US. While NEP does talk about introducing foreign education institutions within India, we have so far failed to bring in anyone worthwhile.

It would be advisable to relook at our policies and redouble efforts both from central and state levels to bring immediate improvement to India's higher education ecosystem. While we should continue to focus on building homegrown institutions, there's no doubt that competition from foreign universities, along with access to globally recognised academics, will provide immense opportunities to, and traction for, India's scholars.

All this would, of course, require our politicians and administrators to be a little more thick-skinned and willing to accept criticism and research output that could even be contrary to their ideological posturings. But is it not what a healthy democracy is all about? If that allows us to 'reclaim' our 'Nalandas' and become a real 'Vishwaguru', pinpricks some politicians could feel would be a small cost to bear.

In 1998, China's Project 985 selected 39 universities for increased investments to make them 'world-class'. Ecosystems are now forming similar to those in Boston and Bay Area in the US

While primary and secondary education improvements are necessary to solve today's problem, higher education can be the doorway for India to claim dominance in this century. If we don't act now, it'll be difficult to catch up to the yawning gap between us and China, and the US.

The writer is MD, data and AI, strategy and consulting, Accenture

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INDIAN EXPRESS (P-10), 24 MAY 2025

US AND THEM

Targeting of foreign students signals America's retreat from its own superpower. The world watches as the battle shifts to court

WHAT DOES IT mean to be an international student, now, in a country that celebrated itself as the "land of the free" till recently? In the view of US Homeland Security Secretary Kristi Noem — enforcer-in-chief of the Donald Trump administration's brazen attack on Harvard University — the onus hereon will be on the non-citizen student to prove her innocence. In effect, the order revoking Harvard's access to the Student and Exchange Visitor Information System (SEVIS) bars arguably the US's most prestigious university from enrolling foreign students. The six conditions that the Homeland Security department has laid out include giving to the government "any and all audio or video footage in the possession of Harvard University of any protest activity involving a non-immigrant student on a Harvard University campus in the last five years". What does it mean, then, to be a student in a country that views free expression — whose corollary is creativity and innovation — as a threat? To study, and perhaps make a life, in a superpower that is retreating from the very promises and principles that powered its rise? The answers to these questions will be found in times to come on the campus, on the street and in the courts in the US. They will resonate far beyond the country.

There is a utilitarian defence of the F-1 visa: Foreign students pay more than their US counterparts; diverse backgrounds enrich student and faculty communities; open universities have ensured that the US has the best minds (America has the greatest number of Nobel laureates, many of them from migrant backgrounds). But such an accounting assumes that the Trump administration's actions are grounded in an economic or strategic rationale. It is clear that this is not the case. Anti-semitism in a small section on the campus is being invoked to police what has been, for all its faults, a bastion of free expression. In a populist moment, the elite private colleges — including and especially the Ivy League — make for convenient scapegoats, to appeal to a base that feels left behind. The weaponisation of visa status sends a chilling message down the line on the right to protest and dissent. It says to every American: If we can go after Harvard, we can go after you. The attack on "foreigners" is of a piece with the parochial politics that is the hallmark of Trumpism.

Last month, when the Trump administration withdrew federal funding for Harvard and threatened its current course of action, the university's president said it would not surrender its independence. After the latest order, Harvard is taking its case to the US courts. But the universities must also look within. They must ask why they are seen by many as places of exclusion, and how they can reach out without compromising on excellence. More broadly, as the US tries to remain in pole position globally vis-a-vis China, it risks losing its greatest soft power. The F-1 visa is an aspiration for many across the world and the basis for much of America's power. Trump does his country grave disservice in trying to make it a target on a student's back.

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TIMES OF INDIA (P-22), 24 MAY 2025

Trump Spots Red Star Over Harvard

His latest attack on America's premier univ is part of his anti-intellectual crusade. Court has temporarily blocked the move, but foreign students' plans & US reputation will still take big hits

Amit Gupta

Columnist based in Ottawa

Harvard sued and got a temporary stay on the Trump administration's latest ruling–disallowing the university from enrolling foreign students. Calling enrolment of foreign students a "privilege not a right...to help pad multibillion-dollar endowments", what homeland secretary Kristi Noem said bears repeating. "This administration is holding Harvard accountable for fostering violence, antisemitism, and coordinating with the Chinese Communist Party on its campus."

Even existing students are not safe since the homeland department has said the thousands of current foreign-born students at Harvard "must transfer or lose their legal status."

Trump has trained his guns on American universities for a while now as he seeks to get these institutions to change their behaviour. Trump's supporters view university faculty as pampered, lazy, elitist, and worst of all, liberal.

Trump team has in particular targeted Diversity, Equity, and Inclusion (DEI) programmes – it wants Harvard to shutter all DEI measures that violate federal law. Per Trump 2.0, Harvard's support of affirmative action (reservations) supposedly lowered workplace standards and allegedly took away jobs and university admissions from white Americans.

Bill Ackman, the billionaire who led the campaign to oust Harvard's black woman president Claudine Gay for her perceived anti-Semitic positions, also lamented that the number of Jews going to Harvard had declined. This appeared to suggest that DEI quotas had taken away seats from deserving Jews.

In fact, it was Asian-Americans who faced discriminatory quotas at Harvard that limited the number who could get in despite their having requisite grades and qualifications. It took US Supreme Court to rule in favour of Asian-Americans and force schools like Harvard to not use affirmative action as a criterion for admission.

Particularly disturbing is the Trumpian call for diverse viewpoints in all departments. Does this mean that in engineering, computer science, and medicine, three areas in which Harvard excels, one's political and social beliefs become one of the criteria for hiring?

Since assuming office, Trump 2.0 has leveraged federal financing to try and reshape the country's universities. Trump successfully forced Columbia to accept his recommendations on anti-Semitism by threatening to withhold $400mn. Now after attempting to coerce Harvard by cutting off $2.2bn in federal funding, he has also decided to not allow foreign students to enrol.

Universities fear such steps will reduce academic standards & impact their standing

The latest ruling is no less severe a blow to Harvard. Over 27% of its student body comprises international students – among the world's most academically competitive ones. An education at Harvard also leads to a national and international who's who of students network, invaluable to careers. Al Gore's roommate at Harvard, for instance, was actor Tommy Lee Jones. As a friend who studied at Harvard recounted her first class – it included the great grandson of Danish philosopher Soren Kierkegaard and grandson of Nobel physicist Linus Pauling. Xi Jinping's daughter graduated from Harvard under an assumed name. For Harvard to lose such an international body would be disastrous.

Trump 2.0 was irked because it felt Harvard, like Columbia, failed to protect Jewish students during the anti-Israel protests last year. But this is just a convenient excuse for broadening the scope of university reform. American conservatives have for long believed academia is staffed by liberal faculty who seek to indoctrinate young people and shut out the conservative voice. The crusade against universities is now a significant part of US's ongoing culture war.

Trump administration has already sent a letter to Harvard demanding governance and leadership reform, merit-based hiring and admissions reform, viewpoint diversity in hiring and admissions, and reformation of academic programmes with an egregious record of anti-Semitism.

What universities fear is that such govt measures will reduce academic standards and adversely impact these institutions' global standing. Shanghai Jiao Tong University's respected annual ranking of the world's 2,000 best universities puts sixteen American universities in the top twenty in the world – the top three were Harvard, MIT, and Stanford.

To preserve their global brand, these universities have to continue to attract the best students from around the world. To do that, they want to keep their campuses free from state interference. Can Harvard succeed in its fight though?

Harvard has deep pockets because its endowment is over $53bn. It also has influential and wealthy alumni who would not only canvas donations for it but also publicly support it (both George W Bush and the Obamas are alumni). More importantly, four of the nine Supreme Court judges, the bench that may ultimately decide the case, went to Harvard, four graduated from Yale, and only Amy Coney Barrett graduated from Notre Dame.

But the Trump administration can order embassies to restrict visas to students admitted to Harvard. For Indian students who have accepted admission to Harvard this could mean a wasted year since it is too late to switch schools.

Harvard's case will possibly be fast-tracked. While Harvard got a stay order, the Trump ruling in the short run will wreak havoc on the academic careers of international students unless the two sides agree to compromise.

The writer taught at US Air Force War College & University of Illinois

TOI/24/27

DECCAN HERALD (P-13), 25 MAY 2025

SANS THE SACRED

Can exams test your true mettle?

I recently saw a picture of a bride in Hassan, in Karnataka, still in her bridal attire and writing her BCom examination, on her wedding day. Perhaps we can add to the quote about only two things being certain in the world – death and taxes – with a third: exams.

Exams always seem to be in the news, whether it is the controversies over paper leaks, discrepancies in syllabi, or the photographs of top achievers looking their best, printed in neat little rows on the newspapers of the day. Of course, exam results come with interviews – children seem to score even more each year. Parents gush about how focused, methodical, and impervious to distractions their children are and children, in turn, dedicate their performance to their parents, teachers, and well, you get the gist. Exams have their place as a necessary evil – but far too much significance has been attached to their outcomes. I was always told in school that one had to do well in their tenth standard board exams to succeed in life; after all, the report card is requested as evidence everywhere. What no one mentioned is that the report card is most often used as proof of the carrier's identity and nobody glances at the marks he or she has scored!

Unlike the kids of our times, Sanskrit poets in the past had far more amusing challenges posed to them. Even relatively recently, in 1885, when Sundararaja Bhattacharya, the Sanskrit poet and the author of *Padmini Parinaya*, met the King of Travancore, the king suddenly posed him a metrical challenge in Sanskrit – "The moon held Shiva on its head." We all know that Shiva holds the crescent moon on his head, but when on the earth does the reverse happen? The talented poet responded in the same meter, citing the destruction of the Tripuras by Shiva – the moon became Shiva's chariot wheel, and so, in effect, it held Shiva on its head.

Anusha S Rao
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Legend goes that the king Bhoja had heard so many poems during his reign that he grew tired of them and wanted some original ones for a change. And so, he announced a substantial reward – of a lakh gold coins – to anyone who could present him with a new poem. Unfortunately for the poets who tried to fulfill his wish, the learned scholars in the king's court were pretty formidable.

One of these scholars could memorise anything by hearing it once, another could do that by hearing it twice, and the third, by hearing it thrice. And so, when a poet dared to approach the court and recite his poem to the king, the scholars would immediately declare that the poem was not new and that they knew it already. Then, the sharpest of the three scholars would recite the poem aloud, having heard it once. This was followed by a rendition by the second scholar, and then the third – thereby demonstrating that the poem was not a unique one. Finally, a poet managed to win the challenge by reciting a new poem in Sanskrit verse – "King Bhoja! You are a virtuous and truthful man. Your father had previously taken a crore's worth of gems from me. That you should give me that amount back is a fact well-known to all the scholars assembled here. And well, if they do not know of this fact, then they cannot possibly know my poem either, and so you owe me a lakh gold coins."

The scholars were all taken aback by this 'poem', and ultimately, the king had to present the poet what was announced as the reward. This is far from a "poetic" poem, of course, but the poet successfully played and won the game. All this to say, exams are all well and good, but stressful challenges – much like exams – are no good at evaluating anyone's true worth!

Across
THE AISLE

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Why no jobs for most youth?

THERE ARE two recent reports on the Micro, Small, Medium Enterprises (MSME) sector, one by the Small Industries Development Bank of India (SIDBI) and the other by NITI Aayog. Both are official reports. There is also the Annual Survey of Unincorporated Sector Enterprises (ASUSE).

Basic Facts, Features

What are the basic facts about the Micro, Small and Medium Enterprises (MSME) sector that can be gathered from the two reports?

- Under the current classification, Micro enterprises have an investment limit of up to Rs 2.5 crore and turnover limit of up to Rs 10 crore; Small have up to Rs 25 crore and up to Rs 100 crore; and Medium have up to Rs 125 crore and up to Rs 500 crore. By this classification, it will be clear that all but a few thousand enterprises in India are MSME.
- The distribution of the total number of MSMEs is skewed in favour of Micro: the shares are Micro — 98.64 per cent; Small — 1.24 per cent; and Medium — 0.12 per cent only.
- Ownership is proprietorship (59 per cent), partnership (16), LLP (1), private limited company (23) and public limited company (1).
- There are approximately 7,34,00,000 MSMEs in India. Of these, about 6,20,00,000 are registered on the Udyam Portal as on March 2025.
- There is a credit gap of about 24 per cent in the MSME sector (about Rs 30 lakh crore); in the services sub-sector the gap is 27 per cent and in women-owned enterprises it is 35 per cent.
- MSMEs contributed approximately 45 per cent of India's merchandise exports in 2023-24. In absolute terms, the number of exporting MSMEs was 1,73,350 in 2024-25 (that is a fraction of 1 per cent of the total number of MSMEs). The key goods that are exported are ready-made garments, gems and jewellery, leather goods, handicrafts, processed foods and auto components — all but one, low technology goods.
- There is a plethora of credit support schemes and development schemes for MSMEs. Reading the reports, I counted at least two subsidy schemes, four credit guarantee schemes and at least thirteen development schemes. The Budget for 2025-26 announced a scheme for first-time entrepreneurs and a credit card scheme. It also announced a new Fund of Funds, a Deep Tech Fund of Funds and a revamped Street Vendors Nidhi (PM SVANidhi).
- MSMEs are the primary source of employment generation. It is claimed that the total employment generated by the sector is around 26 crore.

Jobs Yes, Persons No

Now, let's come to the central question of this essay. Among the major challenges in the MSME sector, the reports list:—

** Skilled labour shortages, skill gaps and difficulty in attracting talent.*

These findings tell the whole story of unemployment in the country. It is fair to assume that larger industries (with investment of over Rs 125 crore and turnover of over Rs 500 crore) employ persons with higher educational qualifications and higher skills which the bulk of the unemployed do not possess. On the other hand, MSMEs need labour; yes, if they have labour shortages and difficulty in attracting talent, why? The regrettable but inescapable conclusions are, *firstly*, that the applicants for jobs do not have the education or the skills to fill the jobs. And, *secondly*, that the jobs on offer are not attractive because of the structure of the enterprise or the emoluments.

Matching the structural facts and the employment outcomes, it is not difficult to infer the reasons why there is high unemployment among the youth of India.

- the population of India in April 2025 was 146 crore.
- the labour force participation rate (LFPR) is the percentage of the population that is either working or actively seeking employment. It is 55.6 per cent or about 81 crore.
- the worker population ratio (WPR) defines the proportion that is employed among the total population. It is 52.8 per cent or about 77 crore.
- the absolute number of persons who are unemployed is the difference, namely, 4 crore. That's a large number but, remember, it is out of the number 'actively seeking employment'. There are many millions who have given up seeking employment for different reasons. the official unemployment rate is 4 crore (81 crore which equals 5.0 per cent.

Path To Solution

The overwhelming number of MSMEs are 'micro' — 98.64 per cent. Together with the fact that proprietorship and partnership constitute 75 per cent of all MSMEs, it is abundantly clear that the bulk of the 26 crore 'employed' are family members and relatives working in family-run enterprises. It is the 'small' and 'medium' (1.36 per cent of MSMEs or about 10,00,000) that actually employ people where there is a master-and-servant relationship.

- The 'supply' side of jobs has to come from the 10,00,000 MSMEs.
- The 'demand' side for jobs has to come from the young men and women who are school drop-outs or have a school education or have a basic arts or science degree.

The potential employers are hit by lack of credit, the oppressive regulations, and the multiple schemes and compliances. The potential employees are hindered by the lack of quality education, lack of skills and absence of training — in short, there is little 'talent'.

Governance should focus on these shortcomings. The first step is school education with skills training. The next step is helping SMEs (now that I have dropped the M) with just one liberal credit-cum-interest subsidy scheme. Keep it simple.

..The regrettable but inescapable conclusions are, *firstly*, that the applicants for jobs do not have the education or the skills to fill the jobs. And, *secondly*, that the jobs on offer are not attractive because of the structure of the enterprise or the emoluments

Sugar Isn't Sweet for Children

CBSE asks schools to set up sugar boards to prevent Type 2 diabetes in children and teens. Experts weigh in

Anonna Dutt

ILLUSTRATION: COURTESY

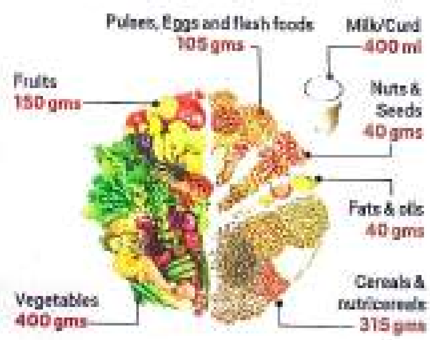
THIS IS a story of two 12-year-old food addicts, separated by geographies but united by their food choices. A boy in Kochi ordered burgers and fries twice a day, alternating between McDonald's and KFC for variety. His counterpart in Delhi lived on carbohydrates exclusively, beginning with cheeseburgers for breakfast, albeit homemade, rice and rajma at school lunch, sub-sandwiches as filler snacks, chocolate chip cookies or pastries for hungry bites and cheesy pastas for dinner. All of these were interspersed with Coke cans or energy drinks. Both of them were diagnosed with Type 2 diabetes, a condition where the sugar-regulating hormone insulin is not enough to keep blood sugar levels in range.

Both boys had built addictive behaviours because of unchecked and indulgent food habits in their early years without a commensurate increase in physical activity. They stuck to desk-bound routines given their academic pressure. And they were grossly overweight. This is the reason that a 2023 report by the Indian Council of Medical Research (ICMR) found the prevalence of Type 2 diabetes in two per cent of school children (aged between 10 and 19) in urban India. In some metropolitan areas, this figure was as high as 3–4 per cent.

That's why the Central Board of Secondary Education (CBSE) has mandated the establishment of sugar boards in affiliated schools to modify children's habit-forming behaviour from the very beginning. As part of this effort, schools will remove high-sugar, high-fat items like sodas, chocolates and pastries from the canteen and come up with healthier menus. They will also help build awareness on calorie-dense foods and their health impacts.

Suggested balanced diet for physically active boys
(16–18 yrs, weighing 64 kg, Energy 3300 Kcal)

Suggested balanced diet for physically active girls
(16–18 yrs, weighing 56 kg, Energy 2490 Kcal)



NATIONAL NUTRITION ... GUIDELINES

THE BEGINNING OF AN ADDICTION

The Kochi boy was introduced to fast food with outings just a couple of times a week. This turned to one meal every day and soon multiple meals a day. "When his parents came to me, their child's food addiction was akin to a drug because it targets the brain's reward centres. That's what processed, packaged, high sugar, high salt and high fat food does. He would shout, cry and break things around the house, compelling his parents to keep some frozen fries and burgers in the fridge. In fact, they moved back from the Middle East to Kerala to curb his addiction," says Dr Jothydev Kesavadev, founder and chairman of Jothydev's Diabetes Research Centre in Kerala. The child now suffers from obesity, Type 2 diabetes and liver disease. "While these conditions can be managed with medication, we have to address the problem of food addiction. Just diet correction won't help, the child has to be counselled," says Dr Jothydev.

It is in an extreme case like this where pediatric doses of newer obesity drugs like semaglutide have a role. The expanded label now includes semaglutide's use in adolescents 12 years or older, who have a very high body mass index (BMI). Its use is advised along with a reduced-calorie meal plan and increased physical activity. "These drugs can address the craving for energy-dense foods. Due to their actions on the hypothalamus, these drugs are now thought to be effective in addressing several types of addictions, including alcohol addiction," says Dr Jothydev. The key, however, is to prevent the condition instead of treating it once it happens.

WHAT THE CBSE DIRECTIVE MEANS

The CBSE noted a significant increase in Type-2 diabetes among children over the past decade, adding that sugar constitutes 13 per cent of the daily calorie intake of children between the ages of four and 10 years and 15 per cent for those between the ages of 11 and 18 years. This is much higher than the recommended five per cent.

Schools are getting proactive too. "We have more than 120 doctor-parents and I have roped them in to help with plans to lower sugar in children's diets. They suggested that we should not call it a no-sugar or no-carbohydrate diet — children need some of it for their brain function. Instead, we are teaching children about the glycemic index — a measure of how quickly food raises blood sugar — of different food items. We are telling them how they can replace certain high sugar or high carbohydrate items from their diet. For example, they can have shikanji instead of Coke or energy drinks, they can replace their roti at night with millets," says Sudha Acharya, principal, ITL Public School, Dwarka, Delhi.

Before the summer vacations, the school is even teaching children how to plan their weekly meals and maintain a chart of what they are eating. "We have asked them to note down changes in their bodies and mood during this period. This is an effort to take healthy eating habits home, which is very important. Because if the family is having chole bhature, the child is likely to," she says.

Acharya has made sure that the school canteen — where students can have their everyday meal or purchase snacks to be had with their tiffins — serves healthy options only. "The school canteen does not serve cold drinks, fried snacks such as samosa or aloo bonda. We serve simple meals such as rajma chawal, upma, beetroot cutlets, millet idlis. Drinks are sattu buttermilk and aam panna. We also ensure that fruits are served with meals," says Acharya.

LIFE POSITIVE

TAKEAWAY

Before the summer vacations, some schools are teaching children how to plan their weekly meals and maintain a chart of what they are eating

• • •

Sugar constitutes 13 per cent of the daily calorie intake of children between the ages of four and 10 and 15 per cent for those between the ages of 11 and 18. This is much higher than the recommended five per cent

• • •

GUIDING PARENTS

Dr Jothydev has seen a consistent increase in the number of children, teenagers and young adults coming to him with obesity or Type 2 diabetes. He talks of a 15-year-old girl, who was presumed to have juvenile diabetes or Type 1 diabetes, an autoimmune condition, and put on insulin injections. "It was after she suffered two episodes of extremely low blood glucose levels requiring hospitalisation that we realised she had Type 2 diabetes," he says. That was partly because she was over-fed by her parents who thought she lacked nutrition. "She was obese. At the age of 15 years, she looked like 22," adds Dr Jothydev. He talks about another 17-year-old girl, who was overfed by her grandmother. "In her time, the grandmother saw cases of malnutrition such as Kwashiorkor, a severe protein deficiency, and marasmus, a macronutrient deficiency. She was trained to look out for under-nutrition. Now, the challenge is the opposite. A chubby baby may not be a healthy baby. Most people do not understand the concept of normal weight for children, which has to be relative to their age, gender, and height," says Dr Jothydev.

Explaining why Type 2 diabetes in children and teenagers is not rare any longer, Dr Ambrish Mithal, Chairman of Endocrinology and Diabetes at Max Healthcare, says, "Food choices are a direct reflection of economic growth and urbanisation. Convenience and restaurant foods are easily available and nobody wants to cook at home anymore." He hopes the CBSE's sugar drive would bring about a behavioural change. "This is very difficult to bring about in adults but children are at a stage where they are still developing habits. Schools must link diet correction with physical activity," he adds.

The school routine can work with certain home interventions, too. Having set meal times for the family, taking time to prepare meals and involving the children in the meal preparation process can help introduce healthy habits, according to Dr Jothydev.

Dr Bharati Kulkarni, director, National Institute of Nutrition, advises parents to encourage balanced meals based on local and seasonal foods. "Limit processed foods, establish regular meal times, encourage the habit of not skipping breakfast, promote hydration — choose water over sugary beverages. They must also encourage consumption of fruits, vegetables, eggs, milk and adequate amounts of fish and lean meat (for those who consume non-vegetarian foods), promote coarse grains instead of highly polished cereals. It is good to involve children in meal planning and preparation. Importantly, parents should lead by example. They should also reduce academic stress and promote physical activity and adequate sleep," she says. As nutrition becomes a part of a child's foundational regime, it has become everybody's challenge.

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26/25/5/IEA

The magic of books for growing minds

SANDIP BANERJEE

Reading books helps build a proper human. This age-old belief appears to be receiving a jolt in contemporary living, particularly of the young generation. In a world filled with screens and gadgets, the power of books often gets overlooked. However, it is important to remember that reading is not just a hobby; it is a gateway to a whole new universe of imagination and learning for children. The magic of books lies in their ability to transport young minds to enchanting worlds, expand their vocabulary, ignite their creativity, and nurture empathy. So, why should children read books? Let's explore the reasons behind this captivating endeavor.

Firstly, books unlock the doors to boundless imagination. When children immerse themselves in a good book, they embark on extraordinary adventures, where anything is possible. With each turn of the page, they envision vibrant landscapes, courageous heroes, and mystical creatures. This imaginative journey strengthens their creativity and allows them to explore the depths of their own minds.

Secondly, reading books is like nourishment for language development. As children flip through the pages, they encounter new words, phrases, and sentence structures. The exposure to diverse vocabulary helps them expand their linguistic repertoire and express themselves with greater eloquence. Reading enhances their communication skills, enabling them to articulate their thoughts and ideas effectively.

Moreover, books serve as cognitive exercise for young minds. When children engage with stories, they absorb information, analyse complex ideas, and make connections between different concepts. This mental workout stimulates critical thinking, problem-solving abilities, and analytical reasoning. Furthermore, books with intricate plots and diverse characters nurture empathy, as children empathise with the joys and struggles of the protagonists. This realisation of empathy determines their attitude in their social and domestic interaction. They tend to become more flexible and tolerant in their social aptitude.

In addition to intellectual development, reading books is an excellent way for children to broaden their knowledge horizons. Books are treasure troves of information, offering insights into various cultures, historical events, scientific discoveries, and more. By exploring different genres and topics, young readers become curious learners, constantly seeking new knowledge and understanding the world around them.

Finally, books have the power to shape compassionate and ethical individuals. Through literature, children encounter characters from diverse backgrounds, cultures, and experiences. This exposure allows them to develop fellow-feelings as they step into the shoes of these characters, understand their perspectives, and appreciate their unique journeys. Reading helps children build emotional intelligence and nurtures their ability to relate to others with kindness and understanding.

Reading of books prepares the children for their academic and other curricular activities in a much more refined manner. As reading builds higher levels of concentration, comprehending a subject becomes easier. In -depth study of any subject is not possible without adequate reading. Studies serve for delight, for ability and for decoration of expression. Reading develops a sense of studies which facilitates learning and character-building. The journey from education to employment is incomplete without books. The vocational requirements can never be complemented without reading relevant information. Modes of digital information or use of Facebook and Whatsapp or other social media handles can fill our minds with information but they can not replace the original content of reading books.

In the post COVID scenario education has been devastated, there has been steady degradation in its standards. One major reason for this is assumed to be the lack of reading original text books and relying heavily on digital forms of education. This is alarming because apathy of reading would certainly lead is selective studies and suggestive learning.

This in turn suppresses the power of analysis and interpretation. It also leads to stunted growth in creativity. There is every possible chance that we inculcate the habit of convenient learning. If it happens then it will impact our vocational career in the long run because the learning outcome would be less than desirable.

In conclusion, the importance of reading books in a child's life cannot be overstated. It is a doorway to healthy living of the mind whose influence reflects even in behaviour and conduct. In such a happening the greater community is benefited with a better psycho-social living. It is important to open a child's mind to the wonders that lie within the pages and watch as they sail on unknown errands of knowledge that will shape their lives forever.

Empirically Enlighten

Beyond the visible

Look around – the planets, solar system, stars, galaxies and even you and me – we all make up just around 5 per cent of the universe. Intrigued? There's more. This part that is visible, that is known, is commonly deciphered as the observable universe or ordinary matter of the universe. But what about the rest?

Scientists claim that about 27 per cent is dark matter, and a huge 68 per cent is dark energy. Dark energy is a force that we can't see or touch; it doesn't emit or interact with light. However, it's a crucial part of the cosmos, as it is responsible for speeding up the expansion of the universe over time.

Earlier scientists believed that after the Big Bang and the formation of the stars and galaxies, the expansion of the universe was slowed down as the galaxies were pulling on each other with gravity. However, in the 1920's, astronomers noticed that galaxies were moving away from us which meant the universe is expanding! The theory of general relativity by Einstein also helped explain the phenomenon. Further in 1998, two teams of researchers found that the expansion wasn't slowing down; rather, it was accelerating. Something unexplained was pushing galaxies apart. By observing and studying a bright star explosion called a *Type Ia supernovae*, the scientists discovered this force and called it 'dark energy'. The term was first coined by astrophysicist Michael Turner.

DECCAN HERALD (P-6), 26 MAY 2025

IN PERSPECTIVE

Harvard: The battle for free thought

Trump's move to end Harvard's ability to enrol international students targets more than a university

JOHN J KENNEDY

The Donald Trump administration's decision to bar Harvard University from enrolling international students is not just a spat between a populist government and an elite academic institution. In truth, it is a fundamental confrontation over power, ideology and the purpose of education in a deeply polarised society. The stakes extend far beyond Harvard's gates, touching on constitutional principles, the stability of US higher education and the lives of thousands of international students who travelled to America in pursuit of better opportunities but now find themselves mere pawns in a political chess game.

At one level, this move fits a now-familiar pattern in Trump-era politics: elite-bashing as populist theatre. With its global prestige and progressive values, Harvard makes for an irresistible target. It symbolises everything Trump's base has been told to distrust: cosmopolitanism, liberal intellectualism and a vaguely defined "deep state". By accusing the university of harbouring antisemitic protests, collaborating with Chinese entities and noncompliance with federal demands for data on student activism, the administration closes its crackdown in the language of national security and civil rights. But make no mistake — this is less about protecting Jewish students or curbing espionage and more about chilling dissent and asserting control over academia.

The legal dimension is both urgent and precarious. Harvard's lawsuit alleges that the administration's actions violate the First Amendment and due process, which is a serious claim. Harvard's case hinges on the argument that the federal government is using immigration tools as blunt instruments to punish a politically disfavoured institution. Legal experts are split: some believe the university's rights were clearly infringed, while others caution that courts tend to defer to executive authority in immigration matters, particularly when framed as national security. Even if Harvard prevails — its legal firepower and public support suggest it could — the damage is already done.

Over 6,800 international students, most of them graduate researchers, face the risk of deportation, disruption and uncertainty. These students are not agitators or subversives; they are scholars, scientists and thinkers who invested their futures in a country that once promised intellectual freedom. For them, this is not an abstract policy debate. It is a personal crisis. The government's demand for detailed surveillance of international students' protest activity is a step towards authoritarianism, incompatible with the values of a free society. However, Harvard's response has offered little by way of concrete reassurance to the students caught in limbo. The irony is bitter: in a standoff allegedly about safeguarding student rights, the students themselves have become collateral damage.

The implications go far beyond Harvard. If the federal government can revoke student visa privileges from Harvard, what's to stop it from targeting other universities that host protests or challenge state policy? Institutions reliant on international enrollment and federal funding may begin self-censoring, curtailing speech and surveilling students to avoid scrutiny. The ripple effect could erode academic freedom nationwide, undermining the openness that once made US universities a global magnet for talent and innovation. There is also a stark economic truth here. International students pump over $40 billion into the US economy annually and fill vital roles in STEM research and university funding structures. As they start choosing Canada, the UK, France or Australia instead, American higher education won't just suffer ideologically: it will take a financial and scientific hit. And no amount of political posturing will reverse the brain drain once it accelerates.

What is needed now is clarity, courage and care. The administration, if it genuinely aims to address antisemitism or espionage concerns, should do so with transparency and precision, not through blanket punishments that endanger innocent students. Harvard must go beyond legal resistance and take immediate action to support affected students, offer legal help and ensure academic continuity. More broadly, it is time for a systemic rethink of how America handles international education. Safeguards must be implemented to prevent political retaliation from masquerading as security policy. Immigration decisions that impact thousands of students should require judicial oversight. Universities must recognise that defending academic freedom means more than just protecting their brand; it means showing up for the people who make them what they are.

In the end, this is more than a legal battle or an institutional standoff. It is a reckoning with the kind of country the US wants to be. Will it remain the beacon of global education it claims to be, a sanctuary for diverse thought and a defender of democratic values? Or will it become a place where ideology dictates intellect, and visas are granted or revoked at the whim of politics? The answer to that question won't just shape Harvard's future. It will define America's standing in the world. And for thousands of students who dreamed of building their lives here, the answer has never mattered more.

(The writer is former professor and dean, Christ Deemed to be University, Bengaluru)

The great astrophysicist believed it's essential to have voices who question mainstream dogma

Giant Narlikar, Universal Man

Somak Raychaudhury

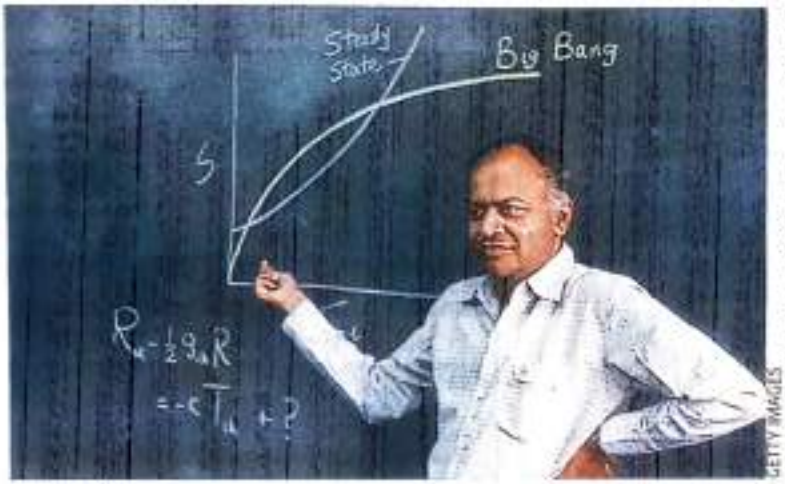
In June 1995, Cambridge University's Institute of Astronomy (IoA) celebrated the 80th birthday of its founder, the renowned physicist Fred Hoyle. Members of the original team who helped establish one of the world's leading scientific institutions in 1972 were invited.

Among them was Jayant Vishnu Narlikar, one of the founding faculty of IoA, and one of Hoyle's old research students. Narlikar was then founding director of Inter-University Centre for Astronomy and Astrophysics (IUCAA) in Pune, a place modelled closed after IoA. At the summer garden party on one of those rare English sunny afternoons, Hoyle, the most important figure in Britain's post-WW2 astronomy and space sciences establishment, was asked to speak about his life in science.

In a letter to Robert Hooke in 1675, another Cambridge scientist, Isaac Newton, had famously said, 'If I have seen further, it is by standing on the shoulders of giants.' Hoyle started his speech about his main contributions to astronomy by saying, 'If I have seen further than others, it is by standing on the shoulders of a Jayant.'

In the 1960s, Narlikar, with his mentor Hoyle, developed a work that's arguably the finest among their scientific oeuvres. Hoyle-Narlikar theory of gravity presented an alternative to Einstein's general relativity by fundamentally incorporating Mach's Principle.

'Think of it this way: what if the weight and mass (inertia) of an object isn't just something it has by itself, but is actually influenced by everything else in the universe? Unlike Einstein's theory of relativity, which sees gravity as a warping of space and time, Hoyle and Narlikar proposed that gravity is a direct interaction between all particles in the universe, near and far.



GETTY IMAGES

Immortal lines

Their theory also included a unique concept called the 'creation field', which meant new matter constantly appearing to keep the universe expanding without becoming empty. This was consistent with their model of the universe—steady state theory—which believes the universe to be infinite in age and expanse. While we now have strong evidence for the Big Bang model—which believes the universe began from a point almost 14 bn years ago—this theory was a bold and thought-provoking alternative that pushed scientists to think differently about how our universe works.

Celebrity came early to Jayant Narlikar. He was a decorated student, a senior wrangler in Cambridge mathematics with lots of prizes under his belt. With his work on cosmology with Hoyle being discussed in the halls of science across the world, the Indian government laid out a red carpet for him to return to India and set up a strong group in physics and astronomy research at Tata Institute of Fundamental Research (TIFR), from which would hopefully spawn many others.

In 1988, UGC created for him his own institution, IUCAA, in Pune, to help build astronomy and cosmology teaching and research in all the universities across India. At 27, he had been awarded the Padma Bhushan, which later became a Padma Vibhashan as he stepped off his 3-term stint as director of IUCAA.

Narlikar's approach to the nature of gravity, even at an early stage of his career, showed that at heart, he was a maverick. As most cosmologists grew comfortable accepting the Big Bang model, Narlikar held his ground that the steady state had to be the answer. As more evidence was unearthed in favour of Big Bang, he responded with alternative explanations. With Geoff Burbidge and others, he proposed the quasi-steady state model, a universe that contracts and expands, cycling endlessly, with no beginning.

Hoyle and Narlikar proposed that gravity is a direct interaction between all particles in the universe, near and far

The cosmic microwave background, which is the strongest evidence in support of the Big Bang, was elegantly explained with a kind of interstellar dust. Models of dust led to more problems. But Narlikar was undeterred. He refused to stop thinking, or reimagining. He was not a contrarian, but somebody who believed that it's essential to have voices who question mainstream dogma.

As IUCAA director, I cherished Narlikar's daily presence at the institute in his office next to the library, where I would regularly go for discussions and advice. In the entire time I worked with him, I found his allegiance to his theories never to be dogmatic. In front of students and other academics, he would be open to all-out debate about anything he did or did not believe in. He would argue with impeccable rigour, ever smiling.

The fact that I often contradicted him in academic debates was never held personally against me, or anybody else. Narlikar was a professional academic in every sense of the term.

I got interested in astronomy as a child from his books, and Carl Sagan, whose TV series, 'Cosmos,' he brought to Doordarshan audiences. Later on, as I worked alongside him to bring science to the public, especially to young people, I saw the true Jayant Narlikar—the maverick who was not afraid to question the core dogmas of science, as well as all-pervasive pseudo-science in society, embodied in astrology and general superstition.

Narlikar was truly a giant, not just of astrophysics or academia, but of rational thought and expression, and spent a lifetime very effectively communicating this to the rest of the world. There won't be another of his kind. Adieu.

The writer is vice chancellor, Ashoka University

27/26/8

The PROMPT paradox

AI can help you learn faster but true understanding comes from one's own thinking, effort, and experiences

Salil Sabadevan

GETTY IMAGES/ISTOCKPHOTO

AI prompting is powerful. It accelerates work, scales ideas, and connects information. But without context, curation, and personal agency, it leaves you painfully mediocre. To go beyond AI, focus on what it cannot do and work on the unpromptables in learning.

You can prompt AI to write an essay, summarise a book, solve Maths, or code. It delivers fast and polished results. But being fast is not mastery and being polished need not be original. The Prompt Paradox is the illusion that all knowledge can be generated through proper prompting. Prompts are useful but insufficient when dealing with context, curation, and metacognition. As you see, learning also calls for things that cannot be prompted.

Real-world experience

Reading about climate change may provide information, ideas, and statistics, but understanding its impact on a fishing village involves knowledge of rising sea levels in a lived context. Facts remain hollow without the weight of real-world experience. Not all contexts can be lived. In the same way, not all knowledge can be prompted.

Prompts can describe experiences, but they cannot replicate the visceral nature of embodied learning, such as dancing, enjoying the taste of a mango, or struggling to learn cycling. Similarly, prompts can provide ethical frameworks, but they cannot truly simulate the lived experience of moral deliberation.

Spotify changed how we listen to music. Instead of following artists or albums, many of us get algorithmic playlists based on mood or other preferences. This is convenient, but it flattens diversity and misses the context. In the same way, in AI-driven learning, when we receive personalised content, the context is collapsed, and intellectual diversity is reduced. Processing knowledge in fragments strips it of its depth.

Real learning, like real music, demands active curation. Algorithms can assist but should not decide. Otherwise, we risk being trapped in a loop of the familiar – never challenged, never changed. Repeated exposure to second-hand information builds an illusion of knowledge, not expertise.

Active curation

Curation is knowing what to leave out to focus on what is important. The more we rely on AI-automated promoting, the less agency we apply in choosing what to engage with as learners.

A student researching now can gather hundreds of articles in seconds and summarise its dimensions, but forming a perspective requires human discernment, which cannot be prompted. Much online course content is often recycled, leading to diminishing returns as each iteration merely repeats its predecessors. Prompting cannot solve the problem of digital regurgitation, which clutters the internet with zero originality.

Both learners and educators should be aware that true personal voice emerges from reality, not from algorithms or re-hashed data. If avatars blur reality, students risk losing personal agency, becoming trapped in algorithmically defined personas.

Struggling with mathematical proof builds mental resilience. However, when AI provides quick fixes, it short-circuits this essential struggle, holding back the natural cognitive growth.

While AI can mimic thought patterns using graph-of-thought prompts, it lacks self-awareness. Metacognition – thinking about your own thinking – is key to evaluating and planning how you learn, in such situations. But here is the thing: you cannot just prompt it. To go beyond AI, focus on what it cannot do.

What you can do

Before querying AI, journal your thoughts to clarify understanding and gaps in understanding.

Engage with the real world. Read, discuss, and experience to go deeper.

Actively filter and interpret information to develop discernment, rather than passively consuming online content.

Use AI as a starting point, not a conclusion. Integrate ideas instead of substituting them.

Combine prompting with your insights to contribute meaningfully rather than echoing. While AI delivers answers, only you can assess their significance; true understanding arises from your interpretation, not mere data shuffling where endless rephrasing saps originality.

Challenge AI by crafting questions that expose its limitations and biases.

Run Bias Audits by generating AI content on controversial topics and scrutinising inherent prejudices. Let the learner understand the fragility of the prompted 'knowledge'.

Practise cognitive disobedience. Question algorithmic suggestions and uphold your human agency. Unquestioning reliance on algorithmic authority will soon be a serious AI issue in learning. Paradoxically, these practices will make you a better and more responsible AI prompter.

You can prompt for answers. You cannot prompt for understanding. True learning happens where AI stops and you move from prompting to understanding with learner autonomy. There, you rely on context, metacognition, personal expression, and the constructive struggle of meaning-making.

Surrounded by algorithms, if we fail to confront potential biases and ignore the unpromptables in learning, we reduce ourselves to an average learner. That is the act of critical engagement with AI. It separates thinkers from mere users of AI.

Views are personal

The writer is Deputy Secretary, University Grants Commission.

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INDIAN EXPRESS (P-10), 26 MAY 2025

America against America

By going after Harvard, Trump risks undermining one of America's greatest assets — higher education

SUMIT GANGULY

ON MAY 23, a federal judge issued an injunction against the Trump administration's order to prevent Harvard University from admitting international students. This order, which the Secretary of Homeland Security, Kristi Noem, had conveyed in a letter to Harvard's International Office, was the latest missive the university had received from the administration. In the letter, the Secretary accused the university of "... perpetuating an unsafe campus environment that is hostile to Jewish students, promotes pro-Hamas sympathies, and employs racist 'diversity, equity, and inclusion' policies".

Earlier, in April of this year, the Trump administration had frozen as much as $2.2 billion in federal research funds awarded to Harvard in competitive processes. Much of this funding had been allocated to the university's TH Chan School of Public Health and the Harvard Medical School. Both organisations are now reeling from the effects of these abrupt budget cuts on a wide range of research programmes, including a host of ongoing clinical trials now in serious jeopardy.

Harvard's troubles began in earnest during a Congressional hearing last year in the wake of the October 7 terrorist attacks in Israel by Hamas, when the Chair of the House Republican Conference, Elise Stefanik, grilled Harvard's then-president, Claudine Gay, on charges of antisemitism on the university's campus. Stefanik and all her Republican colleagues on the Committee on Education and the Workforce, and even some Democrats, commented that Gay's responses were both anodyne and legalistic. Subsequently, owing to her failure to address the issue of antisemitism more forthrightly, followed by charges of plagiarism in some of her academic writings, she was forced to resign from the university presidency.

Despite Gay's resignation, Harvard remained in Republican sight. Soon after Donald Trump took office for the second time, his administration issued a series of demands intended to dramatically curtail the university's institutional autonomy. These included governance and leadership reforms, revised hiring criteria, changes in admissions procedures for both domestic and international students, reforms in the arena of viewpoint diversity, and an external audit of university units accused of "egregious ... antisemitism or other bias".

What seems to have placed Harvard directly in the administration's crosshairs is its refusal to buckle under the government's threats. Columbia University, another Ivy League institution faced with massive losses of federal grants, after initially resisting, had decided to comply with the Trump administration's similarly intrusive demands in the wake of its own handling of protests on its New York City campus.

On the face of it, many of these expectations appeared innocuous. However, had Harvard decided to acquiesce, it would have amounted to the university relinquishing its intellectual, academic, and administrative independence. Alan Garber, the university's new president, had forthrightly agreed to address the issue of antisemitism on campus long before the administration issued this strongly worded warning.

What seems to have placed Harvard directly in the administration's crosshairs is its refusal to buckle under the government's threats. Columbia University, another Ivy League institution faced with massive losses of federal grants, after initially resisting, had decided to comply with the Trump administration's similarly intrusive demands in the wake of its own handling of protests on its New York City campus. Although it is a wealthy university, Columbia's endowment is a fraction of the size of Harvard's, and its administrators decided that the threatened loss of $400 million in federal research funds was more than it could bear.

The Trump administration's hostility toward universities is not confined to the Ivy League, even though its member institutions have borne the brunt of these attacks. What explains the bellicosity of the administration toward storied institutions of higher education? In considerable part, this hostility stems from a belief on the part of many within the administration that these educational institutions are bastions of political liberalism. They also believe that, under the guise of academic freedom, most universities are hostile to conservative ideas and are in the business of indoctrinating students.

Given that this is a deep-seated and widely shared belief among its personnel and its supporters, the administration has made every effort to demonise universities amongst the American electorate, significant numbers of whom did not attend college. It has also quite deftly expropriated and exploited some legitimate grievances that many American taxpayers share. For example, in the last several decades, tuition costs have skyrocketed across the entirety of American higher education (in fairness, at state universities, this is in part due to declining state subsidies to higher education). At the same time, universities, both public and private, have seen significant administrative bloat and some of their departments, especially in the humanities disciplines, have increasingly focused on issues of class, race, and gender.

Addressing shortcomings and flaws is justifiable. However, the Trump administration does not seem to have a thoughtful, imaginative, or meaningful strategy for tackling them. Instead, it appears intent on exploiting them for political ends. Its reckless wielding of the budgetary axe threatens to undermine one of America's greatest assets — higher education. This is a sector that has contributed in great measure to America's innovative capacity and its intellectual standing. The administration's ostensible goal of addressing the shortcomings of US higher education is now placing all those achievements at risk.

The writer is a Senior Fellow and directs the Huntington Program on Strengthening US-India Relations at the Hoover Institution, Stanford University

26/5/25 | 10

Price of edu spirals in age of unaided, 'innovative & industry-ready' colleges

Hemali Chhapia & Yogita Rao | TNN

FEES MUST REFLECT VALUE: EDUCATIONISTS

Mumbai: About a decade ago, in a corner of the economics department at St Xavier's College, someone scribbled a simple equation on the back of a cafeteria napkin. It was an attempt to put a price on knowledge—how much did a student really pay for each lecture? The answer was a jaw-dropping 65 paise.

A lecture in an aided course, back then, was cheaper than a cup of roadside chai. The govt chipped in; education was aided and affordable for all. But those days, like old college chalkboards, have faded into sepia. Fast forward to the past seven or eight years, and the campus landscape has changed.

The rise of unaided courses—marketed with sleek brochures as "innovative" and "industry-ready"—has re-written the college catalogue.

TIMES Special

These programmes come with a higher threshold for Class 12 scores, visiting faculty who carry the weight of boardrooms, and well-oiled placement machinery. Once rare and peripheral, these courses have now ballooned—spilling across timetables, drawing aspirants in hoards. But along with prestige and promise, they've brought price tags that make 65 paise sound like folklore, pushing many in the lower middle class to take a loan to pay fees.

Principals recall a quieter era, when govt aid paid for leaky roofs and crumbling staircases, & kept classrooms stocked with chalk. That changed with the slow, unceremonious withdrawal of maintenance grants. Vacant teaching posts —once filled with an air of urgency — began to gather dust. "Today, many institutions shuffle along with half their sanctioned faculty missing in action," said a principal.

And then came the push. From being hand-held by the state, colleges were nudged into becoming "self-sustaining". To stay afloat, colleges launched unaided courses, the academic equivalent of boutique ventures. Visiting faculty and industry professionals were brought in; their honorariums, one principal admitted, were anything but modest. Full-time faculty for these programmes, too, came with steeper bills. And since the state had bowed out of the financial equation, students were left footing it.

And this, she said, "led to a caste system", a college within the college. "Soon after, parents started rejecting 'plain' commerce and 'plain' science," she explained further. "A student with 38% came and asked for admission in business analytics. I was shocked and asked if he would be able to cope, but the parent and child had lost faith in the old courses." A shift in parental psyche accompanied the fee spike. "Parents would ask again and again—'Did you say Rs 445 a month?' as if we had it wrong," recalled another principal. "They were used to paying lakhs in school and couldn't believe college could cost less."

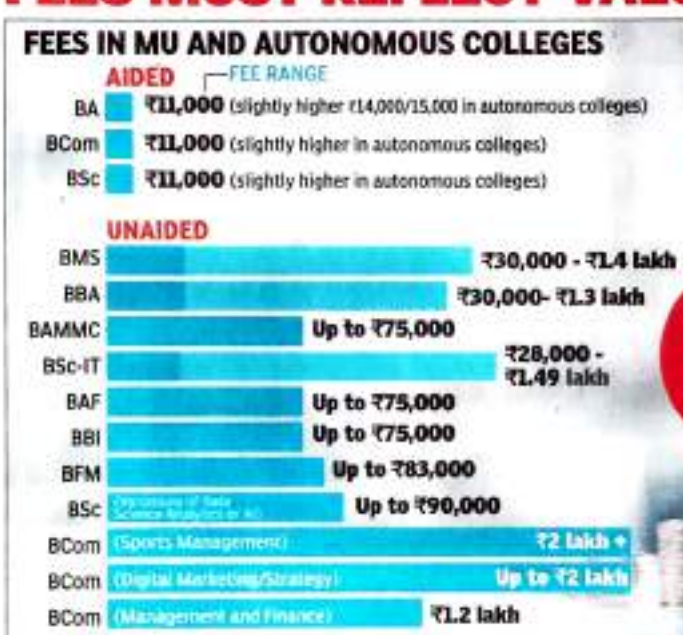
Yet, somewhere in this price-value spiral, perspective got misplaced. Students and parents felt "innovative" courses were better than the regular commerce and science programme. "Many of our top CEOs studied 'regular' commerce. Scientists like Jayant Narlikar studied plain science with physics," said a principal. "The course didn't make them. They made the course."

But few understand. "They look at the price and attach a value to it." This preference for polish extends beyond pedagogy. "Students come scouting for amenities —Wi-Fi speed, smart boards, the works," another college head said, half amused. He cited a sports management course with a Rs 2 lakh price tag. "We built a world-class artificial turf. We tied up with a professional agency. That infrastructure needs money."

At a well-known college, students in management programmes receive Harvard case studies and have access to recorded lectures. "Even though we're an aided college, the govt only pays half the staff salaries. The rest is managed through self-financed courses," said the principal. "And junior college fees? Just a few hundred rupees."

Still, not all that glitters is academic gold. "The fees must reflect value," said a senior administrator. In the new campus economy, where chalk is replaced by touch-screen, and trust by transaction, one truth endures: The soul of education isn't in the amenities or the innovative taglines of courses, but in what students take away when the Wi-Fi disconnects.

FEES IN MU AND AUTONOMOUS COLLEGES



FEE RULES FOR AUTONOMOUS COLLEGES

UNIVERSITY GRANTS COMMISSION ALLOWS AUTONOMOUS COLLEGES TO FIX FEES BASED ON THE FINANCE COMMITTEE'S ADVICE

- Courses such as BMS, BBA and BCA recently reclassified as 'professional' under AICTE
- They have thus fallen into the hands of the state's Fee Regulating Authority which will decide their fees

Several colleges have not put up their fees on their websites. It is mandatory to disclose this information

> The scenario is bleak. Let's not tiptoe around the truth. As state funding dried up, colleges were left to navigate turbulent waters alone. Mumbai University, once an anchor, failed to recalibrate aided course fees in time. Had there been foresight, had there been funding, we wouldn't be here
> — A college principal

> It's not profiteering when we charge what it costs to run a self-financed course. There's no govt aid. This is survival. With the weight of the Seventh Pay Commission out of reach, even meeting the Sixth Pay scale feels hefty. Hiring one security guard—to just check ID cards—costs us Rs 20,000 a month. Electricity bills come at commercial rates, without a paisa in subsidy
> — A college principal

> If colleges don't offer value, they'll shut down. Students are discerning; they won't pay for empty promises. No faculty, no placements, no infrastructure? No takers
> — A govt official

NAV BHARAT TIMES (P-8), 26 MAY 2025

अंग्रेज़ी की ताक़त

पहलगाम में हुए आतंकी हमले का जवाब भारत ने ऑपरेशन सिंदूर से दिया, लेकिन इतना काफी नहीं था। नई दिल्ली की सुरक्षा चिंताओं और आतंकवाद को लेकर उसकी बदली रणनीति से वाकिफ कराने और पाकिस्तान के झूठ का पर्दाफाश करने के लिए भारत का सर्वदलीय प्रतिनिधिमंडल इस समय विभिन्न देशों की यात्रा पर निकला हुआ है। इन डेलिगेट्स को भारत का संदेश सटीक और साफ अंदाज में पूरे विश्व तक पहुंचाना है ताकि पाकिस्तान को प्रोपगैंडा का मौका न मिले।

AI Image

साइंस की भाषा

कूटनीति की भाषा । कूटनीति में हर शब्द मायने रखते हैं। यह महत्वपूर्ण हो जाता है कि किस भाषा में बात रखी जा रही है। ऐसे में जब भारतीय प्रतिनिधिमंडल को दुनिया के हर कोने में जाना है, तब तो और भी अहम हो जाता है कि उनकी आपस की बातों में कोई टकराव या विरोधाभास न हो। मेसेज इस तरह दिया जाए कि सभी उसे एक ही तरह से समझें और इसके लिए अंग्रेजी से बेहतर माध्यम कोई नहीं।

सॉफ्ट पावर । अंग्रेजी का कमाल है कि यह सबसे ज्यादा बोली जाने वाली मातृभाषा नहीं है, इसके बाद भी यह दुनिया में सबसे अधिक बोली और समझी जाती है। लगभग 150 करोड़ लोगों ने अंग्रेजी को अपनाया हुआ है। यह इसकी सॉफ्ट पावर है, जिसने विभिन्न इलाकों, संस्कृतियों, कला और साहित्य को आपस में जोड़कर रखा है।

ज्ञान का भंडार । अंग्रेजी का विस्तार व्यापक है। कम से कम 55 देशों की यह आधिकारिक भाषा है और 30 से ज्यादा मुल्कों में इसे दूसरी भाषा के रूप में सिखाया-पढ़ाया जाता है। इंग्लिश की यह रीच इसलिए, क्योंकि दुनियाभर का ज्ञान आज इस भाषा में मौजूद है। लगभग 98% साइंस पब्लिकेशन और इंटरनेट पर मौजूद 49% से अधिक कंटेंट अंग्रेजी में है। यानी, किसी भी नई रिसर्च से रूबरू होने और आगे बढ़ने के लिए यह भाषा आनी चाहिए।

गर्व की बात । भारत इस मामले में खुद पर गुमान कर सकता है कि 2011 की जनगणना के मुताबिक उसकी लगभग 10% आबादी अंग्रेजी बोलती है। अगर उन्हें भी शामिल कर लिया जाए, जो अंग्रेजी बोल नहीं सकते, लेकिन पढ़ और समझ सकते हैं तो यह आंकड़ा दोगुना हो जाता है। अंग्रेजी पर पकड़ रखने वाली इतनी बड़ी आबादी किसी और देश के पास नहीं। यह भाषा की ताकत है और इसी के बूते हिंदुस्तान के प्रफेशनल्स अमेरिका से लेकर यूरोप तक अपना दबदबा बनाए हुए हैं।

सिखाई जाए अंग्रेजी । भाषा संवाद का जरिया भर नहीं, पहचान भी है। लेकिन यह भी सच है कि किसी देश की पहचान केवल उसकी भाषा तक सिमटी नहीं होती। भारत को अपनी अधिक से अधिक आबादी को अंग्रेजी सिखाने पर जोर देना चाहिए और इसका यह मतलब बिल्कुल नहीं होगा कि इससे भारतीयता कम हो जाएगी।

ASIAN AGE (P-6), 27 MAY 2025

A saga of excellence and enduring legacy

PROF (Dr) ARUP KUMAR HAZARIKA

From its founding as Cotton College to becoming a university, this iconic institution has been crucial in fostering intellectual, social and cultural growth in the region.

As Cotton University celebrates its quasquicentennial – 125 years – of academic legacy, it does so with a deep sense of pride, purpose, and responsibility. From its founding as Cotton College on May 27, 1901, to its transformation into Cotton University, this iconic institution has not only advanced higher education in Assam but also served as a crucible for social, cultural, and intellectual development across the entire region.

Cotton College was born out of a historical necessity during the colonial period. Spearheaded by Chief Commissioner Sir Henry Cotton and Assamese visionary Manik Chandra Barooah, the college was established in Guwahati as a response to the absence of higher education institutions in the region. It marked a major step in empowering Assamese youth and democratising education, challenging the prevailing notion that higher learning was only accessible in Calcutta.

The institution emerged at a time of societal transition, as the 600-year-old Ahom rule had faded and Assam was moving towards modern educational frameworks. Chief Commissioner Cotton's foresight – "There should be a college at Gauhati. It will come into being sooner than expected" – captured the urgency of the time. Early opposition and scepticism from some sections of the intelligentsia were overcome with collective will and a sense of responsibility.

Over the decades, the college nurtured generations of leaders, scholars, and change-makers. The diversity within the campus mirrored the multicultural essence of Assam and the broader Northeast, creating a vibrant academic environment. In 1992, Cotton College was declared a Centre of Excellence by the then President of India, Dr Shankar Dayal Sharma – a formal acknowledgement of its academic stature.

The transition from Cotton College to Cotton University was not merely administrative but symbolised a deeper academic transformation. The Cotton College State University Act, passed by the Assam government in 2011, initially created confusion regarding the coexistence of the college and the university. Concerns grew that the historic college, despite offering postgraduate courses since 1929, would be limited to undergraduate education.

Various stakeholders, particularly the Cotton College Teachers' Association, voiced their concerns and advocated for a comprehensive upgrade. A significant intervention came from then Education Minister Dr Himanta Biswa Sarma, who formed an expert committee under the late Prof Mihir Kanti Choudhury. After detailed consultations, the Cotton University Act was passed in 2017, merging the college and university into a single institution – ushering in a new era of academic unity and promise.

Among the most significant recent milestones is Cotton University's accreditation by the National Assessment and Accreditation Council (NAAC). In its first evaluation cycle as a university, it earned a prestigious Grade 'A', reflecting its strong academic foundation, governance, and teaching quality. This achievement not only boosts its national credibility but also enhances opportunities for research funding, collaborations, and academic exchange.

Cotton University received the PAIR (Promoting Academic Infrastructure and Research) Grant, affirming its expanding research potential. The grant supports infrastructure upgrades, lab modernisation, and interdisciplinary innovation initiatives.

One of the most notable infrastructure developments is the installation of a dedicated 11 KV HT feeder from APDCL's substation, ensuring a reliable and uninterrupted power supply – further reinforcing the university's academic and research capabilities.

Now, the quasquicentennial celebration is not just ceremonial – it will serve as a catalyst to revisit and realign the institution's vision. Entering its 125th year, the institution has embraced the challenges of globalisation, technological change, and the demand for interdisciplinary knowledge by building a more flexible and inclusive academic ecosystem.

This spirit of reform aligns closely with the principles of the National Education Policy (NEP) 2020. The NEP advocates for multidisciplinary and vocational learning, flexibility in curricula, and a student-focused approach. Cotton University has adopted these guidelines through new academic offerings, the promotion of interdisciplinary research, and the fostering of innovation.

The university's Higher Secondary section, recognised under the Assam government's Best Practice Mentorship Programme, reflects its deep-rooted commitment to early academic development. It plays a vital role in shaping well-rounded learners and preparing them for higher education and competitive futures.

A major asset in Cotton's recent transformation is its young and dynamic faculty. Their energy and research-oriented mindset have significantly enriched the academic culture. Faculty development programmes, internal research grants, and regular participation in national academic events have become central to institutional growth.

Nonetheless, challenges remain. Like many institutions in India, Cotton University must confront issues such as limited international exposure, inadequate infrastructure, the need for stronger industry linkages, and the imperative to boost research output and global rankings.

To address these, the university has adopted a strategic, multi-pronged approach. It is upgrading curricula to better align with industry and societal needs. Faculty recruitment and development focus on research excellence and innovation. Infrastructure is being expanded with support from both State and national resources. Cotton is also embracing digital transformation by integrating smart classrooms and online platforms to enrich the learning experience. Furthermore, the university aims to establish Centres of Excellence in key areas such as environmental science, data science, biodiversity research, and Northeast India studies. These centres will serve as hubs for research and collaboration, elevating Cotton's academic profile globally.

As the institution marks its quasquicentennial, it does so not merely by reflecting on the past but by actively shaping its future. From a modest institution born out of regional aspiration, it has become a university of national repute – symbolising perseverance, vision, and excellence.

The spirit of Cotton lies in its people. Generations of students, faculty, alumni, and staff have contributed to its enduring legacy. Notable alumni have gone on to serve with distinction in literature, politics, public administration, science, and the arts – continuing to inspire and support the institution that shaped them.

With a strong foundation, clear mission, and bold vision, Cotton University is poised to rise to even greater heights. It remains a beacon of knowledge, leadership, and enlightenment – not only for Assam and the Northeast but for India and the world.

DECCAN HERALD (P-8), 27 MAY 2025

Teacher shortage: Stopgap is no solution

Faced with a severe shortage of teachers, the Karnataka education department has announced the recruitment of 51,000 guest teachers – the highest-ever – for the 2025-26 academic year. On the surface, this appears to be a welcome and urgent response to a long-standing crisis. However, the sheer scale of this measure raises troubling questions about the government's planning, priorities, and commitment to quality education. Why did we arrive at a situation where over 50,000 positions were left vacant in the first place? This decision, while necessary in the short-term, is a glaring example of systemic failure. Temporary appointments may offer a band-aid solution, but they expose deeper wounds of administrative neglect.

These guest teachers will remain in service only until permanent staff are recruited or until the end of the academic year. But what happens to them after that? Many choose government schools over better-paying private institutions, holding hope that temporary service may lead to permanent employment. Unfortunately, history offers little reassurance. Guest teachers in government institutions served for years, only to be discarded when permanent posts were filled. Many were deemed under-qualified, while others, having dedicated over a decade to teaching, found themselves age-barred from securing alternative employment. The human cost of such ad-hoc policies is immense, both for the teachers and the students who rely on them. The government claims that permanent recruitment will begin once internal reservation for the SC category is resolved. But must we wait? Recruitment should be a continuous, streamlined process, not a reactionary measure when vacancies reach crisis levels. Education is too important to be held hostage by administrative inertia and political indecision.

Karnataka must look beyond temporary fixes, recruit permanent qualified teachers

The data paints a grim picture. In Kalyana Karnataka alone, there are 20,875 teaching vacancies. Unsurprisingly, the region lags in SSLC results with Kalaburagi recording a dismal 42.43% pass rate. Government schools across the state fared poorly, with a pass percentage of 62.7%, compared to the Karnataka Residential Educational Institutions Society (KREIS) schools run by the Social Welfare Department for marginalised students, which achieved an impressive 91%. Primary and secondary education forms the bedrock of a child's future. If Karnataka is serious about securing the prospects of its students, it must move beyond stopgap solutions. Appointing permanent qualified teachers – not temporary fixes – is the only way forward. The state must act decisively, expedite recruitment, invest in teacher training, and ensure stability in schools. Children deserve more than a patchwork education system; they deserve a future built on certainty, not contingency. 28/5/2025

DECCAN HERALD (P-8), 27 MAY 2025

Harvard pushback key to idea of America

A major source of America's soft power has been its university system which is accessible to students from across the world. Its universities have contributed substantially in imparting the nation's ideals to these students. Most American universities have displayed the stated ideals of the country – pluralism, tolerance, freedom of thought, respect for knowledge and ideas, keenness for innovation, and other qualities considered critical to human progress. America has represented and promoted these qualities which have enabled its rise as a world leader. Harvard University has led other reputed centres of education in America in all these respects. It has now been targeted by President Donald Trump. The move is in line with Trump's running confrontation with the progressive traits of American society – his mission seems to be to undermine the university and send out a message to his constituency and the wider America.

The attack on Harvard started weeks ago, soon after Trump assumed office. The administration froze federal grants of about $2.2 billion to financially paralyse the university, over non-compliance with a set of demands. These demands included reporting of students who violate the law, commissioning of an external party to academic departments, ostensibly to introduce diversity of views but aimed to control them, reducing the influence of faculty members and students in university affairs, and providing of all admission-related data – sorted by race and national origin – to the administration. Every demand is intended to control the university and change its character. Protests by students on the Palestine issue, for example, is a violation of the law. Now, a ban has been imposed on the admission of foreign students. Some 6,800 students – including 750 Indians – who make up about 27% of the university's strength will have to shift to other universities or leave the US. The administration is using the student visa and tax exemptions as weapons against the university.

Resistance to Trump's targeted move is also a fight to uphold pluralism and tolerance

The attack on Harvard is of a piece with the moves against intellectuals and foreign nationals that are part of Trump's politics. The idea of MAGA (Make America Great Again) goes against the idea of a diverse and plural America which is represented by Harvard and other universities. The excellence of America's universities rested on that idea. Harvard is pushing back against the attack on it. It has won a judicial stay on the administration's move but Trump is not one to be deterred by that. This resistance is significant not just for the thousands of students but to the idea of America.

HINDU (P-8), 27 MAY 2025

Why are 'sugar boards' necessary in schools?

How do 'sugar boards' teach children about the health risks associated with high sugar consumption? Has the National Commission for Protection of Child Rights stepped in? Is Type 2 diabetes prevalent in children in India? Has the Food Standards and Safety Authority of India formulated a High Fat, Salt and Sodium definition?

EXPLAINER

Maitri Porecha

The story so far:

In order to check the sugar intake of school going children, the Central Board of Secondary Education (CBSE) has instructed over 24,000 affiliated schools across India to establish 'sugar boards', where information is displayed for educating students about the risks of excessive sugar intake.

What are 'sugar boards'?

Two years ago, food influencer Bevant Himatsingka appealed to schools through a video to start a 'sugar board' campaign, which involves a visual representation of the quantity of sugar contained in a bottle of aerated drink or packaged fruit juice. "Children need to learn in fun and interesting ways the perils of consuming excess sugar. So, in Do It Yourself (DIY) workshops with school children, we ask the students to stick, say for instance bottles of aerated drinks, or packaged juices, (on a paper/white board) and adjacent to that stick the quantity of sugar in a packet and number of teaspoons of sugar that go into the product," Mr. Himatsingka told *The Hindu*. For example, a 300 ml bottle of a popular aerated drink contains eight teaspoons of sugar, with one teaspoon of sugar being nearly four grams. Similarly, a popular brand of a 125 ml packaged mango drink contains five teaspoons of sugar.

'Sugar boards' provide essential information, including recommended sugar intake, the sugar content in commonly consumed foods (such as junk food and cold drinks), health risks associated with high sugar consumption and healthier dietary alternatives.

The CBSE has stated that schools may submit a brief report and photos of the activity on 'sugar boards' till July 15. Mr. Himatsingka said that while many schools have already included 'sugar boards' in their activities, CBSE's directive will create awareness in nearly two crore students and their families.

GETTY IMAGES

Why are 'sugar boards' necessary?

The National Commission for Protection of Child Rights (NCPCR) has pushed for the introduction of a 'sugar board' in all schools, not only in those which are CBSE affiliated, but also in schools which are affiliated to various State boards. In a letter written to CBSE by NCPCR in March earlier this year, the child rights body emphasised, "Over the past decade, there has been a significant increase in Type 2 Diabetes among children, a condition primarily seen in adults. This alarming trend is attributable to high sugar intake... easy availability of sugary snacks, beverages and processed foods within school environments," the letter states.

While population-based data on Type-2 diabetes among children and adolescents are unavailable from India, it is estimated that the incidence of Type 2 Diabetes in the group is 397 per lakh population, next only to China which has 734 estimated cases per lakh. Speaking with *The Hindu*, Dr. Divya Gupta, gynaecologist and a member of NCPCR, said, "Studies indicate that sugar constitutes 13% of daily calorie intake for children aged 4 to 10 years and 15% of those aged 11 to 18 years —substantially exceeding the recommended limit of 5%."

What is India's regulatory stand?

Official sources said that the Food Standards and Safety Authority of India (FSSAI) had convened a scientific panel of experts in April and May earlier this year, to decide on a High Fat, Salt and Sugar (HFSS) definition pertaining only to school meals. However, the FSSAI has still not set HFSS standards or finalised the 'health-star rating system', for front-of-pack labelling regulations. "In the meeting, we could not arrive at definition for HFSS for what comprises a school meal. Discussions are underway and it was decided that the HFSS definition for what comprises school meals cannot be different from that of packaged food. So a holistic HFSS definition should be formulated," an official said.

Currently, FSSAI has regulation for brands making food claims. For instance, a low sugar claim can only be made if a product contains not more than five gm sugar per 100 gm. "While there are regulations in place for making claims on packaged food, FSSAI has not fixed cut-offs for High Fat, Salt, Sugar consumption for the Indian population," the official said. India currently relies on World Health Organization (WHO) cut-offs for ideal HFSS intake. For instance, WHO guidelines restrict daily sugar intake in adults and children to 25 grams (six teaspoons). However, experts argue that the Indian cut-off should be lower, and should be derived from indigenous data, as the genetic make-up of Indians make them more prone to heart attacks. "We need epidemiological data, through a country wide study which monitors dietary intake, along with variables like data on Body Mass Index, insulin resistance, lipid profile, biochemical parameters and so on," said an expert closely working with FSSAI on the issue.

What next?

Dr. Gupta said that the child rights body is working on gradually introducing directives for foods high in salt and trans-fats as well.

"NCPCR is also gathering data on children suffering from diabetes from government hospitals. We will be talking to parents during parent teacher meetings about the importance of healthy eating. We have had stakeholder meetings with paediatric doctors who will be roped in to go to schools for workshops and so on. Introducing 'sugar boards' is just the beginning," Dr. Gupta said.

THE GIST

- The NCPCR has pushed for the introduction of a 'sugar board' in all schools, not only in those which are CBSE affiliated, but also in schools which are affiliated to various State boards.
- 'Sugar boards' provide essential information, including recommended sugar intake, the sugar content in commonly consumed foods, health risks associated with high sugar consumption and healthier dietary alternatives
- WHO guidelines restrict daily sugar intake in adults and children to 25 grams (six teaspoons).

Trump, the anti-intellectual, vs Harvard: Who's winning?

Shobhaa's Take

Asim Munir is reportedly smitten. And the lady who stole his heart is none other than the very becoming Maryam Nawaz Sharif, 51, CM of Punjab, the first woman in Pakistan to hold the position.

Back in the day, "Harvard-returned" enjoyed a special cachet. There weren't that many Indians either bright enough or rich enough to make the cut. Oxford-Cambridge-Harvard — that was the ultimate dream of ambitious parents. "My *beta/beti* is studying at Harvard", has been a proud boast for *Papaji* and *Mummyji* for decades. A "Harvard-returned" guy was considered a trophy husband, and bagging one automatically elevated the girl's family, while the bridegroom's *parivar* automatically added a few zeroes to the dowry. After all, the money invested in that pricey, prestigious degree had to be recovered... loans needed to be paid off. If the bride was a Harvard grad, it was seen as compensation for other shortcomings ("not fair enough... too short..."). Harvard also gave our students a platinum edge in the competitive job market. Parents willingly sacrificed personal goals and comforts to get the kid into hallowed Harvard. Coaches made a killing out of filling in tedious applications and prepping students for the big day, often writing their letters and drafting essays for a steep fee.

Recently, thousands of Harvard dreams got shattered. The Donald was at it again, being petty, vicious and spiteful. Kristi Noem, US homeland security secretary, announced that the Trump administration had revoked Harvard's authority to enrol international students (6,800 strong, and at risk). Shockwaves shook the academic world as panicky foreign students, some of them mid-course, wondered what awaited them now that Harvard had lost its SEVP status. *Desi* students and post-graduate scholars number between 500 to 800, some of them engaged in long-term doctoral or multi-year graduate programmes. Harrowed parents back home, caught totally off guard, scrambled to find a way around the harsh edict which directly affects the future of these kids facing potential deportation. Suddenly, for thousands of Harvard hopefuls, that dream came crashing down and turned into the worst nightmare. Ms Noem has cited "racism" on campus, accusing Harvard of being hostile to Jewish students while spying on them. She has also accused Harvard of fostering violence and coordinating with the Communist Party of China on campus. Beware: Mr Trump has spotted a Red Star looming over the campus. These are very serious charges which were challenged in court by Dr Alan M. Garber, Harvard's president, writing: "We condemn this unlawful and unwarranted action." US federal judge Allison D. Burroughs issued a temporary restraining order against the Trump administration's edict, saying its implementation would cause "immediate and irreparable injury to the university". The odds are favouring Harvard for now. Till then, it's suspense as usual.

The completely delusional US President seems to be on a rampage to insult dignitaries invited by him to the Oval Office, by brazenly ambushing them, cameras rolling. It happened with Ukraine's President Volodymyr Zelenskyy... and the diplomatic community gagged in disbelief. It was repeated with South African President Cyril Ramaphosa, who was accused of the "genocide" of white farmers and humiliated by the host, when Mr Trump ordered his staff to "turn the lights down" so he could show his guest a "couple of things" on television. It is to the credit of Cyril Ramaphosa that he maintained his dignity and poise through the verbal assault without once losing his cool, as Mr Trump went into attack mode, snarled and ranted through the televised encounter to the horror of the watching world.

Instead of retaliating or even repudiating Mr Trump, Mr Ramaphosa smiled through the onslaught, before he scornfully said, "I wish I had a plane to give you", referring to the generous gift of a Boeing 747 presented by Qatar to him. Mr Ramaphosa mildly added: "You wanted to see drama and something big happening... I'm sorry we disappointed you somewhat."

"Make America Crude Again" seems to be Mr Trump's main objective at such orchestrated events, clearly designed to impress fellow Americans and show the rest of the world who's boss. The real boss (Elon Musk) was also present for this round of public shaming of a guest, but remained in the shadows.

In our own neighbourhood, a lot is afoot, with the self-elevation of Asim Munir — from general to field-marshal, in one smooth, face-saving move! Imran Khan mocked the newly-minted supremo, saying "king" was a more appropriate title, given Munir's arrogance and style of functioning. According to the Pakistani grapevine, the hawkish field-marshal is smitten. And the lady who stole his heart is none other than the very becoming Maryam Nawaz Sharif, 51, chief minister of Punjab, the first woman in Pakistan to hold such a position. She is of Kashmiri-Punjabi descent, the eldest of four children of former Prime Minister Nawaz Sharif and his wife Kulsoom, married at 19, with three children of her own. There's some controversy over her academic credentials, but what does it matter? At the moment, the field-marshal's heart is reportedly going *dhak-dhak* for the powerful beauty, who also wants to "show" India. Munir is the only the second Army chief in Pakistan's history to be named field-marshal, after Ayub Khan. If people across the border are jittery about Munir taking complete control of their tattered country, it is understandable. Licking his wounds after India's Operation Sindoor, while trying to save face in front of his own people, can be a monumental challenge for the "jihadi general". Well, till Munir gets used to India's new normal, perhaps his lady love can provide some comfort while he slowly eats his words about the absurd "two-nation" theory he floated.

Amusingly enough, Operation Sindoor became a major fashion statement at Cannes 2025, when Aishwarya Rai Bachchan walked the red carpet with an even brighter sindoor in the parting of her hair. Fans and critics gasped as they lauded her for the triple whammy — in one go, she accomplished a lot with that "*ek chutki sindoor*". She proudly flaunted nationalism, patriotism and matrimony on her forehead, burying divorce rumours, while flashing her Indian/Hindu identity.

The Cannes jamboree is no longer as "exclusif" as the French would like it — it's filled with random people who have nothing to do with cinema. Most of these wannabees show up after shelling out over ₹30 lakhs to be seen on that blessed red carpet. No one knows or cares who these nonentities are. One unidentified woman grabbed eyeballs by wearing a ghastly necklace featuring Prime Minister Narendra Modi's images embedded in prominent lockets, which nestled on her ample bosom. While Modi fans often wear their love for him on the sleeve, this may mark the first time his photographs found a landing place on a buxom woman's cleavage. We aren't complaining! Hurrah for "Sindoor Power"!

Instagram handle @ShobhaaDe; Twitter MA/S *handle @DeShobhaa*

ECONOMICS TIMES (P-6), 28 MAY 2025

Indian 'Colonialism', Go Forth & Prosper

Overseas jobs were always a lucrative option. Now, options are widening even further for Indians, as ageing developed economies increasingly seek skilled professionals amid a workforce shortage. 70k-1 lakh trained nurses have migrated, and demand is expected to rise by 15-30% this year. This is great. A bigger opportunity awaits trained (wo)manpower, that includes industrial and transport workers, hospitality staff, care workers, teachers, and office and administrative personnel. A 2024 BCG-Convergence Foundation report, 'Global Horizons: Securing the 8M+ Global Job Opportunity for India's Talent by 2030', states that if India plays its cards right, the potential stock of India's expat workers could hit 14-15 mn, with inward remittances projected to reach $300 bn.

Beyond traditional destinations like the Gulf, Canada, the US and Britain (the last two tightening their immigration policies at their own cost), new markets like Germany, Japan and South Korea beckon. But India isn't the only one eyeing this space. The Philippines, Indonesia, Egypt, Vietnam and Brazil are also vying for a piece of the pie. The Philippines has built a robust ecosystem — from a focused nodal agency and strategic diplomacy, to a dynamic private recruitment network and globally aligned skilling programmes.

To unlock its full 'Go forth and prosper' potential, India must act decisively: forge G2G partnerships, streamline visa processes, brand and promote 'Talent India', align skilling with global standards — backed by subsidies, grants and scholarships — and offer formal financing to cover pre-migration costs, risks and insurance. India needs to 'colonise' the world with its talent. Such a rising tide can lift all boats, those anchored 'back home' included. ET/6

'David Harvard' versus 'Goliath Trump'

Atanu Biswas

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The ongoing conflict between Harvard University and the Trump 2.0 administration has dramatically escalated since the U.S. Department of Homeland Security (DHS) declared on May 22 that it would prohibit Harvard from enrolling international students. Harvard filed a lawsuit against the Trump administration, calling the action a "blatant violation" of constitutional rights. While the litigation continues, a federal judge has temporarily barred the government's decision.

Mr. Trump has long attacked elite universities, claiming that they promote ideologies that are incompatible with American principles. Throughout the 2024 campaign trail, he pledged to reduce "excessively large private endowments" through taxes, fines, and lawsuits. He vowed to reclaim America's "once great educational institutions from the radical Left and Marxist Maniacs." In 2021, Vice President J.D. Vance called universities "the enemy". It is therefore not surprising that Mr. Trump is now attempting to exert unheard-of influence over university matters.

An escalating crisis

In mid-March, the Trump administration pulled $400 million in federal funding from Columbia University and handed a "ransom note" with numerous demands for returning the funds. Columbia collapsed under pressure. To win over universities, that was a significant step forward. However, a victory over Harvard, the oldest and wealthiest American university, was necessary for Mr. Trump to control universities. Incidentally, Harvard has been perceived by Mr. Trump and his MAGA supporters as having a liberal leaning, serving as a foundation for American elitism, opposing free expression, advocating DEI (diversity, equity, and inclusion), and undermining traditional values.

In April, the administration's demands that Harvard restrict the influence of its faculty and students, report any conduct violations by international students to federal authorities, and designate an outside party to guarantee that each academic department is "viewpoint diverse" marked the beginning of the current conflict. According to Harvard President Alan Garber, fulfilling these demands would give the federal government "control over the Harvard community" and endanger the university's "values as a private institution devoted to the pursuit, production, and dissemination of knowledge."

Harvard, with a huge $52 billion endowment, refused to "fold" like Columbia did. When the administration froze $2.26 billion in its multiyear grants, Harvard filed a lawsuit. On May 5, Education Secretary Linda McMahon wrote that Harvard wouldn't be eligible for any more federal grants until it demonstrates "responsible management." Subsequently, the university lost $450 million in grants from eight U.S. agencies.

The administration vowed to deprive Harvard of its tax-exempt status. A substantial tax hike on the net investment from private college endowments, such as Harvard's, has been included in legislation passed by the House of Representatives, which is controlled by Republicans. Since wealthy donors frequently donate to tax-exempt institutions to reduce their own tax obligations, this would impact the school's capacity to generate money.

Harvard broadened its lawsuit to include the additional budget cuts. In a statement dated May 22, the DHS claimed that Harvard's leadership "created an unsafe environment by permitting anti-American, pro-terrorist agitators to harass and physically assault individuals." It claimed that international students made up a large portion of the agitators.

The Trump administration had the option of acting slowly. It could have let Harvard's ongoing grants expire quietly, refused to renew them, and penalised universities for alleged racial discrimination. Instead, it has created a huge noise in a hurry and, consequently, succeeded in transforming Harvard University into a valiant 'David' opposing the government's 'Goliath'.

Harvard accuses the Trump administration of using international students as pawns in a "campaign of retribution... without process or cause." Nearly 6,800 international students attend Harvard, making up 27% of its total student body. Revoking visa authorisation, according to the university, would seriously and immediately disrupt its day-to-day operations and require it to rescind admission to thousands of applicants.

What next?

While the U.S. may be undermining its own power by targeting its universities, the U.S. government has control over who is allowed to enter the country. To accept international students, American educational institutions are required to retain a certification through the DHS's Student and Exchange Visitor Program. Therefore, the government may jeopardise Harvard's international enrolment if it wishes to do so.

Harvard's battle against the Trump administration is turning into an epic and will surely serve as a historical reference in any discussion over academic freedom. What's more, Mr. Trump might have just "crowned" Harvard as the opposition leader. Whether or not 'David Harvard' defeats 'Goliath Trump', this battle could help redraw the boundaries for 'academic freedom', which remains an abstract concept, and serve as a road map to rethink the relationship between the government and universities in other parts of the world. A shadowy region would remain, though, which would orchestrate many such future confrontations.

This battle could help redraw the boundaries for academic freedom, which remains an abstract concept

M/9

ISTOCKPHOTO

Experiential learning: how students can learn more effectively

The present education system remains exam-centric. Teaching focuses on providing information, and students only cultivate lower-order thinking skills. Students must move beyond these basic skills to critical thinking and problem-solving

Manaswini Vijayakumar

Humans are a learning species. Our very survival depends on our ability to react and adapt to situations. To thrive, students should proactively create and shape their worlds. The sheer scale of learning is unprecedented in today's world. Children can access information at the click of a button. Bots can teach them concepts and clarify doubts. Conventional schools as information disseminators could become redundant in the near future.

Yet, schools serve a purpose beyond mere knowledge acquisition. They must learn foundational skills of literacy and numeracy, yes. But they must also develop social, emotional, and cultural skills. They must navigate interpersonal relations, understand different views, and become self-aware.

They should also learn how to contribute to society. This is all know-how that comes from the school environment. It should be a microcosm of the world the students will eventually enter.

The need for reform

At present, schools are found lacking on most counts. Children from government and private schools receive differing quality of education, with the majority struggling with crumbling infrastructure, poorly trained teachers, and an outdated curriculum. There still exists a vast urban-rural divide and therefore, unequal access to resources. Laboratories, functional toilets, potable water, and computers continue to be problem areas in the poorest of schools.

However, even when schools get many things right, they remain stuck in a loop of exams, where the value-add is minimal. There is a need to reimagine the present approach to teaching, learning, and testing. Memorisation combined with high-stakes testing has not made children competent; it has merely helped them pass examinations that test a narrow range of abilities.

Moreover, children learn and understand in different ways. They have differing aptitudes, as Gardner's theory of multiple intelligences (the idea that intelligence is not a unified ability, but more a collection of distinct and independent intelligences) explains. Some children learn visually, by watching someone and mimicking them; others learn by reading text; and others understand and learn only when they apply it practically by themselves. The brain is capable of reorganising and rewiring itself to keep learning and develop newer skills – a concept called neuroplasticity.

Here is where experiential learning becomes useful. It offers a more wholesome approach to teaching and learning. As the term suggests, experience is key. It is "learning by doing," focusing on the "how " of learning or the process rather than the outcome. Experiential learning is a continuous, lifelong process of knowledge construction, deconstruction, and reconstruction.

On experiential learning

David Kolb, an educational theorist, first developed the Experiential Learning Theory (ELT), with psychologists such as Kurt Lewin, Jean Piaget, and John Dewey laying the groundwork.

The present education system remains exam-centric. Teaching focuses on providing information, and students only cultivate lower-order thinking skills. These are recall and understanding, as per the revised Bloom's taxonomy (Bloom's taxonomy is a hierarchy or classification of cognitive levels and learning objectives constructed by Benjamin Bloom in 1956, and revised by Lorin Anderson and David Krathwohl in 2001). Students must move beyond these basic skills to critical thinking and problem-solving. They must learn to question received information and learn through peer relations. These capabilities parallel higher-order thinking skills such as analysis, evaluation, and creation. These levels could translate to the ability to compare, differentiate, and invent.

Experiential learning makes students active and involved learners rather than passive recipients of information. Hands-on experiences engage the students' senses and encourages them to think about and apply concepts to the world they've seen around them. By learning this way, children acquire skills they can apply across contexts. They learn how to learn.

Stages of experiential learning

Individual-environment interaction is at the core of experiential learning. This is the dialectical tension that creates growth. The student constructs new knowledge by interacting with the environment. These phases progress cyclically as the student learns and re-learns.

The stages of Kolb's experiential learning cycle are concrete experience, reflective observation, abstract conceptualisation and active experimentation. These stages are inter-linked, iterative and occurs throughout an individual's lifetime. Each spiral of learning further deepens a student's understanding.

Through a concrete experience/phenomenon, the students' sensory-motor faculties are engaged, and they grasp and assimilate information from the environment. In the next stage, that is, reflective observation, students try to understand and interpret the information received via the experience. There may be a difference between their expectations and the experience which would lead to cognitive dissonance. This essentially means that the new information does not fit into their existing mental models. In this process, beliefs do not match the behaviour expected.

Moving on to abstract conceptualisation, students rationalise the new information, adding it to their pre-existing mental models. And by doing so, concepts are changed or created with new or conflicting information. In the final stage of active experimentation, the learner acts on the knowledge received, makes decisions, and solves problems. This action leads to new experiences that, in turn, reshapes cognition once again.

Implementing the model

Experiential learning is a teaching-learning philosophy that comprises many pedagogical approaches. It can be implemented through a wide range of methods. Doing experiments related to a specific topic and facilitating student questions is a form of inquiry-based learning. Teamwork (collaborative learning) on projects and problems helps build a variety of perspectives. Interactive games, group discussions, role-playing, and arts and crafts are also promising. Real-world immersions through outdoor learning and field trips are similarly very engaging for students.

Integrating technology and having simulations is also instructive.

The 'flipped classroom' is a prime example of an experiential learning setup. Rather than have the teacher lead the class, it places the student front and centre. Students explore a topic at home through reading materials and online resources. Then the student solves the problem together with the teacher and the whole class by discussing concepts together. This kind of pedagogy makes students take responsibility for their learning and creates meaningful interactions and deeper learning.

Critiques and challenges

Experiential learning can isolate the student process from the classroom context.

Factors like peers, family background, and culture also affect learning, which are not considered.

Implementation of experiential learning can also be a logistical nightmare. It requires a battalion of resources, be it personnel, materials, or training. This is particularly true in the Indian context, given the size and diversity of students. Student readiness to learn experientially may also be overestimated. For example, are Class VIII students who struggle with grade two English comprehension ready to think critically? A one-size-fits-all solution is not advisable.

However, this does not mean that experiential learning requires a wholesale overhaul of the system; it can fit into the existing setup for a more holistic approach. Experiential learning has the potential to empower students of different learning styles.

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HINDUSTAN TIMES (MAGAZINE-2), 28 MAY 2025

Why personalisation in learning is the need of the hour

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As classrooms grow increasingly diverse and the demands of the workforce shift, the traditional one-size-fits-all approach to learning is falling short of expectations significantly. Personalization in education, powered by data, artificial intelligence (AI), and adaptive technologies, is emerging as the key to ensuring that every learner receives the support, they need to navigate the uncertain waters with confidence and unlock their true potential. Moreover, over 75% of Indian higher education institutions have adopted hybrid models incorporating personalized learning. Government initiatives, such as the e-Adhigam program and the AICTE's 2025 "Year of Artificial Intelligence," aim to impact millions of students with personalized learning tools and platforms.

Diverse Learning Needs

Every student brings unique strengths, interests, and challenges to the classroom. AI-powered tools can assess individual progress, adapt to individual learning styles, and create dynamic, customized pathways, ensuring no student is left behind or held back by rigid structures. There is strong research based evidence that students in personalized learning environments score, on average, 30% higher on standardized tests than their peers in traditional classrooms. In fact, students in these programs also perform 8 percentile points better in math and 9 points higher in reading over a year, highlighting the academic advantages of tailored instruction. By leveraging learner profiles and competency-based progression, teachers can provide more one-on-one support, helping each student reach their full potential.

Student Engagement

Personalized learning environments boost motivation and engagement. Reportedly, 75% of students in personalized learning settings report feeling motivated, compared to just 30% in conventional classrooms. Schools implementing these strategies see a 12% increase in attendance and a 15% drop in dropout rates, clear indicators that students are more engaged and invested in their education. Neuroscience research shows that personalized experiences activate the brain's reward system, releasing dopamine and further increasing motivation to learn. Additionally, 76% of teachers believe that personalized learning significantly improves both engagement and academic performance, underscoring its growing acceptance among educators.

Equity and Inclusion

Technology-driven personalization can provide scalable, targeted support to students who may not have access to private tutoring or enrichment programs, levelling the playing field and promoting educational equity. By using flexible learning environments and tailored instruction, schools can address the diverse needs of all learners, including those from underserved backgrounds. Research indicates that comprehensive assessment frameworks and formative evaluations lead to a 20% increase in student engagement and a 15% improvement in retention rates, further supporting equitable outcomes. As more schools and organizations embrace personalized learning, the potential to close achievement gaps and ensure fair opportunities for all students becomes increasingly attainable.

Workforce Alignment

Personalized learning helps close the skills gap by allowing students to focus on areas most relevant to their future careers, fostering both academic and practical competencies. By integrating data analytics and AI, educational institutions and organizations can better align learning pathways with evolving industry needs, ensuring graduates are workforce-ready. This adaptability is essential for preparing students and employees to thrive in today's dynamic and competitive environment.

Looking Ahead

As data and AI continue to transform education, schools and colleges must embrace these tools to create flexible, inclusive, and effective learning environments. The global personalized learning market is projected to reach $15.32 billion by 2029 at a CAGR of 26.4%. Personalization is no longer an added advantage but a necessity for helping students to reach their full potential. To stay ahead educational institutions must embrace innovative technologies and foster a culture that champions continuous improvement.

The author is founder Zaggle

HINDUSTAN TIMES (MAGAZINE-2), 28 MAY 2025

Focus on language proficiency is key

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India's education system is undergoing a significant transformation, shifting from a focus on theoretical knowledge to an emphasis on skill-based education. This evolution aligns with the National Education Policy (NEP) 2020, which advocates for vocational and practical learning to better meet industry demands. Within this framework, language proficiency, particularly in English, has emerged as a pivotal skill, enabling students and professionals to access global career opportunities. As the global job market becomes increasingly interconnected, effective communication skills are essential for both domestic and international success.

India is currently transitioning from an education model rooted in academic theory to one emphasizing practical skills. According to the ETS-Wheebox India Skills Report 2025, over 50% of Indian graduates are now considered employable, a significant increase from 33% a decade ago. This shift underscores the growing importance of practical learning over purely academic achievements.

Educational institutions are responding by integrating job-ready skills into their curricula, with communication skills as a top priority. Apprenticeship enabled degree programmes have been mooted highlighting the fact that skills are now fundamental to the teaching-learning process.

A recent survey indicates that 60% of workers believe skills-based hiring will become more prevalent by 2025, prompting many to invest in certifications and specialized training. This trend reflects a significant shift in hiring criteria across the nation. As India's middle class expands and the digital economy grows, the demand for professionals who are not only technically proficient but also globally competitive is increasing. However, historical underinvestment in English language teaching has left many students at a disadvantage. Industry-wide reports have shown that English proficiency is crucial for accessing better career opportunities, especially in multinational organizations. The ability to communicate fluently in English has become essential, serving as the primary language of business, technology, and international trade.

The demand for English-speaking professionals is reflected in employment data. Studies indicate that English speakers can command a significant wage premium, especially in the tertiary job market. Additionally, jobs requiring strong English skills often see higher placement rates compared to roles that do not require the language. The need for reliable, quick language proficiency assessments is growing as the global job market becomes more competitive. This trend is evident not only in business and customer-facing roles but also in sectors such as technology and engineering, where clear communication in English is essential for collaboration and knowledge transfer across borders.

English is vital to the operations of Global Capability Centers (GCCs) that are coming up in India, as it supports smooth communication and teamwork with international teams and clients. It aids in the exchange of knowledge and skills while fostering global integration. As the dominant language in business and technology, English is key for GCCs to perform their roles efficiently.

Moreover, as global mobility increases, India's students and professionals need to demonstrate their readiness for international career paths. Reliable and accessible language proficiency assessments play a key role in this, providing an efficient way to measure language skills that are universally recognized. There is an increasing need for flexible, modular assessments that allow candidates to test specific skills relevant to their target job roles. These assessments help ensure that Indian students and professionals can compete effectively in a global workforce, enhancing their employability and opening doors to leadership positions and international career opportunities.

Initiatives such as the Skill India Mission have emphasized the importance of communication skills, including English, in their training programs. These programs aim to equip the workforce with the necessary skills to meet the evolving demands of the global market. Even the Skill India International Centers (SKIIs) established by NSDC to develop a global workforce have advocated for language proficiency and certification.

As India continues to establish itself as a global hub in these industries, the ability to communicate effectively in English enables professionals to engage with international clients and teams, thereby enhancing their career prospects. With the rise of modular language assessments and the continued emphasis on practical skills, India is setting the stage for a workforce capable of competing on the world stage. By fostering strong language skills alongside technical expertise, India is preparing its next generation for success in a rapidly evolving global economy. Looking ahead, tools such as TOEIC can support India's skilling ambitions by aligning with national skill development initiatives, as well as collaboration with industry to provide a certified workforce.

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HT/MV

HINDUSTAN TIMES (MAGAZINE-2), 28 MAY 2025

Can GenAI democratise learning?

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While commuting in his school bus in Mumbai, 12-year-old Aarav pulls out his smartphone, not to play games, but to ask an AI chatbot to explain a complex math problem. Meanwhile, in a rural school in Uttar Pradesh, Priya uses a similar tool to translate into English and practice pronunciation. Welcome to the new face of education, where Generative Artificial Intelligence or GenAI has the potential to transform India's learning landscape. An August 2024 report by Gateway Consulting revealed that 60% of Indian children in cities over age 10 years used GenAI tools such as ChatGPT, Gemini and Claude at least once a week, primarily for educational purposes. This statistic highlights a significant shift in how India's next generation approaches learning and problem-solving.

The Promise of Generative AI

India's education system serves over 250 million students and has long grappled with challenges related to access, quality, personal attention, and a customized approach. This is where GenAI offers a solution, significantly enhancing accessibility and personalization, enabling students to learn at their own pace and comfort.

Anuvadini AI, an indigenously developed GenAI translation platform aims at enhancing communication and education across India's diverse linguistic landscape. Anuvadini Foundation was established by the Ministry of Education to realise the vision in the National Education Policy 2020, of leveraging technology for teaching, learning, testing and translation.

The platform was primarily designed with the objective of bridging the gap between 22 regional Indian languages and several foreign languages. It addresses the significant language barriers faced by 80% of the Indian population who speak native languages while navigating educational and professional systems primarily dominated by Hindi and English. Its advanced features can accurately translate entire books and documents into various languages while preserving their original formats. It can also produce high-quality AI images and instantly translate speech. This makes it a transformative tool for students, businesses and the government (for delivering citizen services). Children and students in rural and remote areas can now access quality education and coaching which was previously out of reach, thereby contributing to social equity.

The Global Context

Globally, the integration of AI in education is gaining momentum. U.S. schools are currently navigating a complex landscape as they consider how to incorporate generative AI tools like ChatGPT into their curricula. The initial reaction was largely negative, with many institutions blocking access to these tools due to concerns about cheating and academic integrity. For instance, the Los Angeles Unified School District quickly restricted access to OpenAI's website following the launch of ChatGPT, fearing it would undermine traditional assessments. Several prominent universities in the UK, such as Imperial College London and the University of Cambridge had also issued warnings to students about the use of ChatGPT for cheating.

However, as educators have begun exploring the potential benefits of Generative AI, perspectives are shifting. Many teachers now see GenAI not just as a tool for cheating but as a resource that can enhance learning by facilitating personalized lesson plans, promoting media literacy, and making lessons more interactive. Polls indicate a significant rise in usage among both students and teachers, with nearly half of K-12 students and teachers reporting weekly use of AI tools.

In October 2022, the European Commission published ethical guidelines for the use of AI in education, emphasizing that educators should use AI critically. The guidelines encourage active involvement of educators in continuous learning about AI's ethical implications and recommend schools to plan, pilot and monitor AI systems with clear policies and engage with the wider community including parents and students for better trust and understanding.

While several countries initially took steps towards implementing bans or regulating Generative AI in educational institutions, India has is yet to issue any model guidelines to educational institutions.

As these global trends unfold, it is crucial to recognize that despite the promise of GenAI in education, there are significant challenges that need careful consideration.

Challenges and Concerns

Despite its potential, adoption of GenAI in education raises certain concerns, including biases, lack of transparency regarding information sources, over-dependence on technology, exposure to inappropriate content, and the inability to foster genuine human connections. In addition, there could be inaccuracies related to socio-political and socio-cultural matters that potentially influence children's perspectives without proper context or critical evaluation. Furthermore, ambiguity surrounding the origin and credibility of information provided by AI systems raises questions about their accuracy and reliability, which may erode trust in AI-generated content.

Additionally, the digital divide poses a significant challenge; while urban students like Aarav have easy access to AI tools, many in rural areas like Priya struggle with basic internet connectivity, risking further educational inequalities. The reliance on GenAI may also lead children to become less inclined to engage in research, learning, and problem-solving. This dependence could diminish their ability to rationalize, fact-check, and critically evaluate information, resulting in an incomplete understanding of complex topics. Moreover, children might view AI-generated information as absolute truth without questioning its accuracy or source, leading to passive consumption of biased or misleading content that could impede their intellectual growth and development.

Concerns also arise from AI's inability to understand social and emotional perspectives during interactions, raising doubts about its efficacy in fostering meaningful human connections and empathy in children. The potential substitution of genuine human interactions with AI could deprive children of essential social skills, empathy, and interpersonal communication abilities. Additionally, inadequate measures for age verification and ensuring child safety can lead to potential exposure to inappropriate content or topics not suitable for their age groups.

The Way Forward

As India stands at this technological crossroads, a balanced approach is crucial. The National Education Policy (NEP) 2020 acknowledges the role of artificial intelligence (AI) in transforming education, highlighting its potential in personalized learning, assessments, and skill development. It also proposes the integration of AI and other emerging technologies into the curriculum to prepare students for a rapidly changing workforce.

However, the NEP was issued in 2020, and since then, the field of AI has seen significant advancements, particularly with the emergence of Generative AI. It will not be an exaggeration to say that the use of Gen AI by students will be the norm rather than the exception.

In light of these developments, it is important to recognize that the NEP may need updates to stay relevant, especially in how it addresses learning and student evaluation systems. While the NEP provides a robust overarching framework, there are areas where refinements are necessary, particularly the manner in which educators and students leverage Generative AI for various purposes. Adapting the NEP to incorporate these innovations will be key to making it fully relevant and implementable in the current educational landscape.

The integration of Generative AI in education would require a multi-pronged strategy. This approach would include, on one hand, educating teachers and parents on using Generative AI effectively and its integration by schools into the curriculum, teaching students how to use these tools effectively and ethically.

The focus needs to be on using AI to enhance critical thinking skills, encouraging students to question and verify AI-generated information. Developing model guidelines which are clear and ethical for AI's use in education will be crucial to address various aspects including privacy, bias, content moderation, using authentic sources, copyright protection and the like. Finally, initiatives to ensure equitable access to AI tools across urban and rural areas are essential for bridging the digital divide.

By embracing this technology responsibly and thoughtfully, India can pioneer a new model of education that combines the best of human teaching with the power of artificial intelligence.

As young Aarav and Priya navigate their enhanced learning journeys, they represent the face of a new India – one that is tech-savvy, globally competitive, yet rooted in its rich cultural heritage. The success of this educational transformation will depend on how well we guide our children to use these powerful tools, ensuring they become not just consumers of Generative AI, but creative masters of it. The challenge now is ensuring that every child, from urban metros to the remotest villages, can benefit from this revolution, creating a future where education knows no boundaries.

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HINDUSTAN TIMES (MAGAZINE-4), 28 MAY 2025

Why the 'No Freshers' hiring policy needs to be carefully re-examined

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In recent years, India has rapidly become a global business hub and is well on its way to reaching its goal of becoming a USD 5 trillion economy by 2030. While several factors contribute to this growth, there is one that emerges as a winner—the country's workforce.

With a population of over 1.4 billion people, a majority of whom are under the age of 35, India is home to one of the largest workforces in the world. To harness this colossal workforce potential, the country needs to generate close to 7.85 million jobs annually in the non-agricultural sector until 2030 as per the Ministry of Finance Report 2024. Yet, even with a steady influx of new graduates ready to enter the workforce, employers are showing a growing reluctance to hire freshers— a trend that could impact the country's workforce potential.

This gradual shift towards a 'no freshers' hiring policy can be attributed to global economic uncertainty, changing business demands, and evolving organisational expectations. Traditional hiring practices, which were previously a reliable source of employment, are now undergoing a significant transformation as companies increasingly prioritise experience and instant productivity.

But is this growing trend of 'no freshers' impacting the country's workforce?

The skills dilemma

The shift away from fresher hiring is leaving a large chunk of graduates out of the job market. Studies reveal that a staggering 60% of Indian engineering graduates are unable to secure relevant jobs. The key reason? A growing skills mismatch.

While academic credentials remain important, they no longer guarantee employment. It's skills that employers are after. With rapidly evolving business landscapes, companies seek candidates who can contribute from day one and possess a diverse set of skills. While graduates also agree that skills play an integral role, acquiring them takes time, which companies aren't ready to offer. As a result, many organisations prefer hiring experienced professionals who need minimal onboarding, further distancing freshers from their first break.

Short-term solution, long-term risk

While overlooking freshers and hiring more experienced candidates may seem like an immediate solution, it can bring significant risks in the long run. Companies may be missing out on innovation and fresh thinking—qualities often associated with younger talent.

Beyond the classroom

As mentioned earlier, the current job market favours candidates who go the extra mile and don't rely solely on their degrees. With employers valuing practical, transferable skills, freshers must equip themselves with them to increase their employability quotient. According to recent trends, communication is the most sought-after skill in 2024. However, the academic curriculum often doesn't evolve to match changing industry demands, making it imperative for students to take ownership of their professional development. Online certifications, internships, competitions like hackathons, and strong networking can all help build a robust skill set. Proactive learning and a clear understanding of market expectations can set students apart—even in a competitive job landscape.

On the other hand, companies must also understand what freshers bring to the table to avoid overlooking them while hiring.

Fresh talent matters

Organisations that follow the 'no freshers' policy could be underestimating the potential freshers have. For instance, fresh graduates often bring an unmatched enthusiasm to learn, adaptability to new technologies, and a mindset free from legacy practices. As a digitally native generation, they are incredibly tech-savvy, which, paired with a natural curiosity, makes them quick learners and often more open to experimentation and innovation. Freshers also challenge the status quo—sparking innovation and offering new perspectives that a team of experienced professionals may not do.

Further, hiring freshers can prove cost-effective for employers. They come with a lower initial investment and with proper mentoring and structured development, can evolve into high-performing employees. On the flip side, an overreliance on experienced talent may eventually inflate hiring costs and reduce the availability of adaptable candidates in the pipeline.

Ruling out freshers can adversely impact companies in the long term. A balanced hiring approach—where companies invest in building talent rather than just acquiring it—is essential to meeting future business needs.

Organisations must re-evaluate their recruitment playbook. By aligning with academic institutions, investing in training programs, and actively engaging with early-career talent, companies can bridge the skills gap and unlock long-term value. Empowering freshers isn't just a responsibility—it's a strategic imperative.

HINDUSTAN TIMES (MAGAZINE-4), 28 MAY 2025

Changing contours of finance education

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Artificial intelligence (AI) is transforming how students and professionals learn finance, making education more interactive, adaptive, and efficient. From AI-driven tutoring systems to advanced financial modeling tools, technology is simplifying complex concepts and reshaping the way individuals prepare for a data-driven world.

One of the most significant impacts of AI is the potential for personalized learning. Imagine a system that adapts to an individual's learning pace, identifies areas of weakness, and provides tailored resources. This approach replaces the traditional one-size-fits-all model, fostering a more engaging and effective learning experience.

Traditionally, education relies on direct teacher-student interaction essential for answering questions, providing real-time feedback, and offering tailored explanations. However, in large classrooms or diverse learning environments, this is often difficult to scale. AI bridges this gap by serving as a personalized mentor, available anytime. AI-powered platforms can provide instant feedback on practice exercises, identify areas for improvement, and adapt question complexity based on a learner's performance, maintaining engagement while supporting individual progress.

Theory alone is insufficient in today's dynamic financial world. AI-powered simulations create immersive, risk-free environments where learners can apply financial concepts in real-world scenarios.

These simulations replicate market conditions and decision-making challenges, enabling learners to experience the outcomes of their choices without real-world financial risk. This kind of experiential learning is critical for developing problem-solving and critical-thinking skills, helping learners confidently navigate complex financial landscapes.

Finance professionals must work with vast data sets, making it essential to extract actionable insights efficiently. AI tools excel at analyzing large volumes of data, identifying trends, and generating predictive analytics that enhance decision-making in areas such as investment management, risk assessment, and market forecasting. This approach not only improves accuracy but also cultivates a more strategic and analytical mindset among finance professionals.

AI has the potential to democratize finance education by increasing accessibility to high-quality resources across the globe. Online, AI-driven platforms can eliminate geographical and economic barriers, providing opportunities for learners regardless of their location. This broader access supports individual growth and contributes to the advancement of the global finance sector.

While AI supports content delivery and learning facilitation, educators remain essential. Their roles are shifting from content delivery to mentoring, guiding, and encouraging critical thinking and collaboration. With AI handling routine administrative or grading tasks, educators can focus more on meaningful, high-level interactions with students.

As the financial sector continues to evolve, continuous learning and adaptability are becoming essential. AI-powered education platforms are redefining how professionals prepare for certifications and upskill in response to industry changes. By offering personalized experiences, real-time feedback, and practical simulations, AI tools are not just enhancing traditional learning they are revolutionizing how finance professionals acquire and apply knowledge in a competitive global economy.

INDIAN EXPRESS (P-10), 28 MAY 2025

WRONG LESSON PLAN

CBSE's plan for mother-tongue instruction risks diverting attention, resources from far more critical priorities

INDIAN EDUCATION URGENTLY needs to address a range of challenges: Equipping students with future-ready skills, improving learning outcomes and critical thinking skills, integrating artificial intelligence (AI) into classrooms, and closing the gap between academic learning and employability. At this time, the Centre's push to mandate mother tongue-based instruction at the foundational level is potentially misdirected. The Central Board of Secondary Education (CBSE) has instructed schools to map students' mother tongues and design early-grade instructions around them by the end of the summer break. While this move aligns with the National Education Policy 2020 and the National Curriculum Framework for School Education's advocacy of foundational learning in the home language, mother tongue, or regional language at least until Class II, it risks diverting attention and resources from far more critical priorities.

The pedagogical value of foundational literacy in a familiar language is well established, but in certain contexts. International models, from Ethiopia to the Philippines, and local experiments, such as Odisha's successful 2006 mother tongue-based multilingual education pilot programme, validate the benefits of this approach. However, these models often operate in relatively homogeneous linguistic settings or are tightly focused on marginalised groups. Applying the same logic uniformly across India's vast multilingual CBSE ecosystem introduces significant complexities. In cities and towns where classrooms host students from a wide array of linguistic backgrounds, the logistics of assigning instructions by mother tongue or home language are deeply problematic. They raise practical questions — how should a classroom with multiple languages be managed? Which language should be prioritised? Trained personnel, multilingual teaching resources and dynamic classroom strategies continue to be in short supply. The result could be inconsistent, confused, and uneven learning experiences — the opposite of what foundational education requires.

The move risks sidelining an even more urgent national conversation: How to adapt the classroom to the realities of rapid technological changes and geopolitical churn. While the world races to integrate AI into pedagogy, enhance digital literacy, and prepare students for jobs that don't yet exist, India's education system is at risk of being bogged down in language politics. For better or worse, English remains the language of aspiration, global communication, and economic mobility for millions of Indian families. An inflexible emphasis on mother-tongue instruction could set back long-term prospects for students, especially those from economically weaker sections for whom an English-medium education remains key to social advancement. In West Bengal, for instance, the Left Front government's rigid implementation of Bengali-medium primary education in government schools in the 1980s left generations with poor English proficiency. This became a disadvantage in white-collar employment, forcing a policy reversal in later years. In a country of India's diversity, any pedagogical shift, especially those directed at early learners, must be well thought out. The CBSE's move, without addressing deeper systemic needs, risks derailing India's educational progress. Policymakers must focus on what matters most: Building a modern, inclusive and intuitive education system that prepares students for the world they will inherit.

STATESMAN (P-6), 28 MAY 2025

Academic Crossfire

The move by the Trump administration to revoke Harvard University's ability to enrol foreign students – citing anti-Semitism and alleged coordination with the Chinese Communist Party – marks a troubling escalation in the politicisation of higher education. While national security and foreign influence concerns deserve scrutiny, sweeping punitive actions against a single institution risk doing more harm than good. Harvard's decades-long ties to China have indeed been complex. From academic collaborations and research centres to significant philanthropic donations, the university has cultivated deep, and at times opaque, relationships with Chinese institutions and individuals. Allegations that Harvard provided training to officials from the sanctioned Xinjiang Production and Construction Corp raise serious ethical and legal questions. So does the case of a former professor convicted for hiding ties to Chinese programmes. But targeting an entire institution – especially one that enrols thousands of students from across the globe – is not a proportionate or constructive response. The move impacts students who have nothing to do with geopolitical tensions, many of whom contribute meaningfully to the university's research, teaching, and global reputation. International students have long been a pillar of US academic excellence. They bring diverse perspectives, foster cross-cultural understanding, and often remain in the country to drive innovation, entrepreneurship, and public service. A blunt-force policy that punishes all foreign students for the alleged misconduct of a few sends the wrong message: that the US is retreating from global intellectual engagement. The irony in targeting universities like Harvard is that they are often among the few American institutions still engaging China on transparency, dialogue, and academic rigour. Severing these ties risks ceding the field to less accountable actors, including private corporations and authoritarian states, who face fewer constraints and often less public oversight. By shrinking the space for scholarly diplomacy, the US may undermine one of its most potent soft power tools. The solution is not retreat, but reform – ensuring that partnerships are ethical and open, not extinguishing them out of political expedience or suspicion. There are valid concerns about China's growing influence on American campuses – particularly efforts to suppress dissent or acquire sensitive research. These must be addressed, but with precision and principle. Stronger disclosure rules, clearer boundaries around foreign funding, and internal compliance mechanisms are far more effective and justifiable than blanket bans or politically charged sanctions. Harvard's legal challenge and the subsequent judicial injunction provide a critical pause. Policymakers must take this moment to reflect on what is truly at stake. Academic institutions cannot be turned into battlegrounds for ideological warfare without incurring severe collateral damage – not just to universities, but to America's ability to lead in science, technology, and the humanities. In the end, the United States must find a way to protect its interests without abandoning its values. Vigilance need not come at the expense of openness. By supporting transparency and accountability while preserving academic freedom, the country can uphold both security and scholarly integrity.

TIMES OF INDIA (P-28), 28 MAY 2025

India Needs UPSC 2.0

Civil service exam needs two reforms. One, reduce max age & number of attempts at entry level. Two, an annual competitive test allowing 40-somethings to enter IAS

Duvvuri Subbarao

The civil service results for 2024 are out. Congratulations to the thousand-odd candidates who have got through what is arguably one of the most competitive exams in the world. In media interviews, many candidates spoke about how they spent many years in preparation and their eventual success after multiple attempts.

For every successful candidate, there are at least ten others who too have invested years in preparation but have failed to make the grade. They are back at square one. An abysmal waste of productive years?

Here are two ideas that govt can pursue to remedy the situation.

The first reform is to review eligibility criteria. Lakhs compete for a thousand-odd positions, making the chance of success extremely small. Yet candidates keep at it till they exhaust all their allowed attempts even as the odds are stacked against them. This is a colossal waste of human potential. It also pushes many candidates into deep financial and psychological turmoil.

There is a view that candidates who do not succeed in two, or at most three, attempts should let go and pursue alternative career paths which can be equally fulfilling. Not everyone is cut out for civil services.

It is unfair though to expect candidates themselves to make that decision. After all, they are susceptible to the 'sunk cost fallacy' – "I've invested so much time, money and effort. All that will go waste if I give up now. Maybe I will succeed this time round."

This suggests that instead of condemning candidates to make that difficult choice, govt should revise the eligibility criteria by reducing the age range and number of attempts. In the 1970s, when I appeared for the civil service examination (that I topped), we were allowed only two attempts and the age range was 21-24 years. This was liberalised

The exam as it stands has what statisticians call type I & type II errors. Some potentially good administrators fail, while some who get in end up as poor performers

in later years to six attempts and an age range of 21-32 years to provide equal opportunity to less privileged candidates from the hinterland. Perhaps this levelling has gone too far? Wouldn't three attempts and an upper age limit of 27 years neutralise the disadvantage?

There is another argument in favour of curtailing the number of allowed attempts. Any examination that allows as many as six chances is likely to privilege mastery of the exam technique over inherent merit.

In my 1972 batch, 60% of us cleared the examination in the first attempt while the remaining 30% repeated their attempt. Today, the ratio would be the inverse of that. There is a strong case for moving towards the old norm.

For sure, there is an element of randomness in any selection by examination. In fact, there is no known system of examination that can accurately test the administrative capability and judgement of an individual, much less when they are in their 20s. Experience has shown that the civil service examination is prone to both, what statisticians call, type I and type II errors. Some who are potentially good administrators fail to make the grade while some who do get in prove later on to be poor performers.

A way to remedy this would be to institute a second tier of recruitment into the civil services, particularly the IAS, at mid-career level when candidates are in the 40-42 age range.

This will be quite different from the current practice of lateral entry that is sporadic induction into govt of about a dozen officers for a fixed period who are brought in for their specialised experience. What I propose is an annual, institutionalised system of permanent recruitment into the civil service of professionals from diverse career paths, selected by the UPSC through an open competitive examination like at the first tier.

This two-tier recruitment will offer several advantages. First, the possibility of a second opportunity at mid-career level will save candidates from the financial and psychological turmoil of investing nearly a decade of their youth trying to get into the civil service. They can pursue other careers and take another shot at the exam mid-career.

The second big advantage of the two-tier structure is the diversity of real world experience it'll bring into public administration. A typical IAS officer today who has entered the IAS in her 20s straight after college has two big lacunae.

First, she hasn't experienced the real world. Second, she hasn't experienced govt from the outside. They have little understanding of the many ways in which people face callous and indifferent governance. Tier 2 recruits will make up for these lacunae and make the civil service collectively more relevant and useful, and maybe even more caring.

That is not to say, and this is said with emphasis, throw away the baby with the bathwater. There is a lot to be said for continuing to recruit young people into the IAS. They bring in youthful spirit, raw enthusiasm and unspoilt enterprise into administration. Many of the major programmes that have been mainstreamed across the country such as the mid-day meal, the employment guarantee scheme and the right to information are the brainchild of sporadic experiments by these young IAS officers somewhere in the country's vast hinterland.

The civil service exam has vastly improved from the time I took it over 50 years ago. But there is still a need to push the envelope.

The writer is former governor RBI

TRIBUNE, (P-8), 28 MAY 2025

Global campuses

Approval to UK varsity a paradigm shift

WITH the formal approval from the University Grants Commission to establish its first overseas campus in Bengaluru, the University of Liverpool joins a growing list of international institutions responding to calls to help reshape India's higher education sector. The UK-based university, which is scheduled to commence admissions by the 2026-27 academic year, is the second member of the prestigious Russell Group to launch a campus in India, after the University of Southampton in Gurugram. According to Union Education Minister Dharmendra Pradhan, 15 foreign universities are expected to establish campuses by 2025-26. Two Australian varsities have already commenced operations in Gujarat. Such collaborations, he says, are needed to push enrolment and advance the country's educational goals. Any established institution that offers an exceptional learning experience, with a strong research culture, is a welcome addition to India's burgeoning but uninspiring educational landscape.

The ever increasing number of students yearning to go abroad demonstrates a widening gap in India's ability to cater to the demand for quality higher education. A surfeit of private institutions may have cropped up over the past 15 years or more, but barring a few, a question mark lurks over the standards despite the princely fee structure. An unresolved issue — and apparently not getting the urgent attention it deserves — is that of the acute faculty shortage and a large number of vacant posts in top universities. The initiative to invite leading international universities to establish campuses is commendable. However, its aim to boost the global competitiveness of the education sector would require a commensurate fillip to the government institutions, and more stringent benchmarks in the private sector.

India is expanding its presence abroad with IIT-Madras opening a campus in Zanzibar. Fascinating opportunities at home for the vast talent pool can be transformative.

TRIBUNE, (P-9), 28 MAY 2025

Will AI ever understand quantum mechanics

NISHANT SANDEV
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ARTIFICIAL intelligence (AI) is doing things we once imagined only humans could do. It can do poetry, detect cancerous cells with high accuracy, solve equations that used to take teams of scientists weeks or months, design new materials, write complex software code, and even simulate the formation of stars in far galaxies. In just a few seconds, it does tasks that once required lifetimes.

For many, it's very positive to believe that AI could one day find the secrets of the universe. And naturally, one question stands out: Could AI someday really understand quantum mechanics — the most counterintuitive and mysterious theory in physics?

As a physicist, I admire the power of AI. It has already become a crucial tool in modern science. But when it comes to openly understanding quantum mechanics, I am doubtful.

AI does not lack computational strength or algorithmic intelligence, but it may be missing something far more fundamental — a feature not measured in processing speed or memory but in experience: consciousness. And without it, AI may never hold the full meaning of a universe where the observer plays a central role.

Quantum mechanics explains the behaviour of particles at the tiniest or micro levels — atoms, electrons and photons. It shows us a world that works in ways our everyday logic can't handle.

In this world, particles can be in two places at once. They can behave like both waves and solid objects. But here's the strangest part: In quantum physics, observation matters, i.e., how do we observe it, and it matters a lot.

Until something is measured, it exists in many possible states at the same time — a state called superposition. But once it's observed or measured, it "collapses" into one state.

In simple words, what we see may depend on the act of seeing itself. Some interpretations suggest that reality, at the quantum level, does not even exist in a definite way until it is observed. That puts the observer — the conscious being — right in the middle of the picture.

This is where AI might hit a wall. AI processes data, yes. But it doesn't "observe" in the same way as humans do. It doesn't experience reality. And that might be exactly what's needed to understand the quantum world.

In the 1930s, mathematician Kurt Gödel gave a theorem. He showed that in any logical system, there will always be some truths that cannot be proven using the system's own rules. This is known as Gödel's incompleteness theorem.

BASIC: Quantum mechanics explains the behaviour of particles at the tiniest or micro levels. GROK

AI is built on such logical systems. It follows rules, even if they're complex. But if human minds can somehow see or understand truths beyond those rules, as Gödel himself believed, then that's a big deal. It means our brains might not just be fancy computers. They might be doing something deeper — something AI cannot do.

British physicist and Nobel Prize winner Sir Roger Penrose took this idea further. He argued that human consciousness might be ingrained in quantum processes inside the brain in "microtubules" inside our neurons. Penrose proposed a theory called Orchestrated Objective Reduction (Orch-OR) which said that the brain may use quantum mechanics to produce consciousness.

> In quantum physics, observation matters. AI processes data, but it doesn't "observe" in the same way as humans do.

This is still a controversial idea, but it raises a powerful question: What if understanding quantum reality actually requires a quantum mind? If that's true, no matter how powerful AI becomes, it may never cross that line. It can simulate quantum systems, yes. But simulation is not the same as understanding.

Let's be fair — AI is really very useful in quantum research. It can solve the Schrödinger equation faster than any physicist. It can help design quantum computers, discover new materials and improve experiments. These are big contributions. They don't require awareness or understanding.

AI works like a super-fast calculator. It moves symbols around, but it doesn't know what those symbols mean. Imagine a machine that reads Shakespeare and analyses every sentence perfectly — but never feels the beauty or sorrow in the words. That's what AI might be like when it deals with quantum physics.

Some researchers assert it's only a matter of time before AI becomes conscious. After all, the human brain is made of matter and follows physical laws. So why couldn't a machine eventually mimic it? Maybe. But even if a future AI becomes "aware", we still don't know if it would be capable of the kind of observation that quantum mechanics seems to require.

Consciousness, especially in the quantum sense, may involve something we haven't fully understood yet — something that comes from being a part of the reality, not just calculating it.

There are also newer theories of physics which explain that reality exists only through relationships — through interactions. And AI, no matter how fast, remains outside that relationship. It's a bystander. A powerful one, but still on the outside.

All this brings us to a point. AI works through syntax — rules, patterns, logic. But real understanding also involves semantics — meaning, awareness and the intuition.

Just as reading the word "love" isn't the same as feeling it, calculating probabilities in quantum mechanics isn't the same as grasping what they really represent. AI may soon predict quantum outcomes with great accuracy (high P-value). But will it ever understand what it feels like to be a conscious observer entangled with the universe? That's far less certain.

Quantum mechanics may not be just a cold set of equations on a chalkboard. It might point to a universe where observation, awareness and relationship are not just side effects but central ingredients. In such a universe, consciousness isn't an add-on — it's part of the equation itself.

And that may be the final wall AI cannot cross. No matter how advanced it becomes, AI might always be a spectator, never a participant. It might map the territory with precision — but never walk the land.

Until we understand what consciousness truly is — and whether it arises from something more than computation — AI will remain a powerful tool but not a true knower of the quantum world. That mystery, it seems, may still belong to the human mind.

US, If It Gets Rough, Export Your Faculty

Take research offshore where the talent is

When Uncle Sam turns Big Brother, it can be a curious spectacle resembling Great Hall of the People-style policy action — with American characteristics. Screening social media posts for foreign students seeking visas to study in US universities — as reportedly stated in a directive cabled to US diplomats worldwide on Tuesday — isn't only a bureaucrat's nightmare, but it's unlikely to shed enough light on applicants' political affiliations. In most cases, students applying for US visas intend to find jobs and settle in the country. The US offers a degree of freedom of expression that many foreign students are unaccustomed to at home. So, their social media posts are usually more 'conservative' anyway. As far as card-carrying radicals go, they may choose not to advertise the fact on social media at all.

US universities, on their part, need foreign students. Overall numbers flatter to deceive, and enrolment in advanced courses of top-drawer universities is truly multinational. It's not just a matter of capacity. Academic outcomes linked to industry funding are critically fulfilled by international students. Industry-funded research provides the US university system its embarrassingly enormous competitive advantage. American companies will seek to guard it against the progressive paranoia of the country's chief executive. If academic research is affected at home, it will be conducted offshore where the talent is. Trump has a fight on his hands to get US companies to invest more at home. But he seems to be opening another front where consumers and producers of innovation may find it easier to conduct their business overseas.

Foreign/US campuses in India have had limited success principally due to a shortage of available faculty. This scenario could change if US universities find newer, tougher barriers on import of students too restrictive. Pushed into a corner, they could find it easier to export faculty. Globalisation has taken jobs to where the workers are. Attempts to reverse it could send research to where the talent is. ET 6

HINDU (P-8), 29 MAY 2025

A case of practical, pragmatic and innovative education

There has been much attention on the issues of the practical utility, employment generating capacity, innovativeness of the research universe and the capacity of the Indian educational universe for global competition under the New Education Policy (NEP) 2020.

The NEP 2020 is a long-term structural reform, designed for phased implementation. It aims to transform India's education system by fostering innovation, strengthening industry-academia collaboration, and enhancing student employability through a wide array of initiatives. The NEP-2020 works in a three-fold way: ensuring originality and indigenously-rooted imagination in research; constant competitiveness in the global educational sphere, and preparing students on a multiple career path.

Badri Narayan

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Towards better employability

The NEP proposes a four-year innovative flexible teaching programme which is certainly not designed to push students into low-paying jobs, as some allege. Instead, students earn other credentials during their educational journey and return later to complete their degrees. This is beneficial to students who might otherwise be forced to drop out without formal qualifications. It enables them to pursue diverse career trajectories with tangible credentials. Along with a vocationalisation of education and industry internships, students gain meaningful knowledge with practical exposure, thereby enhancing their employability. Before the NEP, it was a serious concern whether Indian education provided real world competencies. Under the NEP, there is a push for industry-academia linkages, vocational training, and internships to enhance the employability outcome. Around 167 universities and 59 colleges have already begun four-year undergraduate degrees – 224 universities and 101 colleges offer a multidisciplinary degree programme. To enable an original and innovative research universe, a vibrant research internship programme for undergraduate and postgraduate students has evolved in higher education institutions. This initiative aims to bridge the gap between academic learning and industry requirements by embedding hands-on, practical training within the curriculum.

Additionally, the scheme allows diploma holders, including students who have exited degree programmes or pursued standalone diploma courses, to enrol as apprentices within five years of graduation. These apprenticeships provide on-the-job training at industry establishments and include a stipend, partially funded by the government. Around 197 universities and 93 colleges offer internships to students (3,07,564 students are at the undergraduate level and 58,834 students placed for internships at the postgraduate level). Research and development (R&D) cells have been established in 242 universities, while 113 colleges have established R&D cells that are working to develop innovative research skills among our students.

The New Education Policy has put to rest the concern whether Indian education provided real world competencies

Global competition and Indian education

As a result of these efforts, 11 Indian universities feature in the QS 500 listing. India also has the highest representation in the QS Asia Rankings 2025, with 163 universities across the continent. Under subject-specific performance, Indian institutions recorded a 25.7% jump in total entries (533), with 10 higher education institutions (including six Indian Institutes of Technology, and two Indian Institutes of Management) placed in the global top 50 across various disciplines.

Such data show that India's capacity has been maturing since the NEP reforms. Patents filed by Indian higher education institutions have grown from 7,405 in 2021-22 to 19,155 in 2022-23, which is a 158% increase. India's performance in the Global Innovation Index has been laudable (39th overall). This is an exponential improvement from a decade ago, when India was 76.

In the post-NEP period, there has been much change in the Indian research and innovation sphere. Policy and schemes such as the Anusandhan National Research Foundation (ANRF) 2023 Act, the All India Council for Technical Education's (AICTE) initiative to have Idea Development, Evaluation and Application (IDEA) labs and the Scheme for Promotion of Academic and Research Collaboration (SPARC) have all contributed in giving depth to the Indian research universe. SPARC has been instrumental in fostering a culture of research and innovation by facilitating collaborative projects between Indian and foreign educational institutions It has identified educational partners from 28 countries, which include the United States, the United Kingdom, Germany, Australia and France to advance joint research efforts.

To develop indigenous scientific imagination and educational wisdom, the NEP 2020 has focused on the Indian Knowledge System (vision and pedagogy). It is being implemented from school to higher education. Initiatives such as the Smart India Hackathon are nurturing innovation at the grass-root level. Since inception, it has empowered over 13.9 lakh students, with idea submissions growing sevenfold since 2017.

Sustainable employment

Employability is a multifaceted issue that must be assessed in the context of various dynamic factors, including industry hiring cycles, global macroeconomic trends, and post-COVID-19 pandemic recovery. Employment conditions before and after 2014 may be interpreted by some to show a declining trend in employment among educated youth (15 to 29 years) from 2004-05 to the 2017-18, especially among women. But from 2018-19 on, there has been constant growth in the employment rate of educated youth. By 2023-24, the employment rate of men was 53.4% and that of women at 22.7%, approaching 2004-05 levels. The overall employment rate increased to 38.6%.

For all age groups, also, employment grew after 2017-18, touching 43.7% in 2023-24. The female employment rate grew post-2017-18, reaching 30.7% in 2023-24.

The good job ratio has been growing fast in India. It is supported by the fact that the proportion of regular workers has grown, particularly for men (from 17.2% in 2004-05 to 24.88% in 2023-24. It is further documented that there is a constant decline in casual labour, especially among females (30.31% to 16.68%) and overall (28.85% to 19.83%) in NSS employment and unemployment and Periodic Labour Force Survey (PLFS) data. This suggests a qualitative transition away from irregular, unorganised, low-paying jobs. There is an increase in the proportion of regular workers among men (from 17.2% in 2004-05 to 24.88% in 2023-24), which suggests that more individuals are moving into formal and structured job roles. This data and changing conditions prove that this shift in the employment sector highlights more decent and sustainable employment conditions, contributing positively to economic stability and worker well-being. This cannot be possible without practical, pragmatic and innovative education.

HINDUSTAN TIMES (P-14), 29 MAY 2025

Visa move will hurt America

US economy and soft power will be the losers if the country limits its pick of university students

The Trump administration's directive to US embassies to pause new student-visa interviews until steps are in place to screen political leanings of applicants is in keeping with Washington's ongoing actions against perceived anti-Semitism in US campuses. Such profiling has far-reaching implications for US academia, research, business, and the political economy at large. It will have an immediate impact on students who may have been preparing to study in the US: Indians constitute the largest international group in universities there.

The larger message here is that America has changed and will henceforth be less tolerant of dissent. It will actively seek to censure (and censor) views that are not aligned with the administration's worldview. This may not necessarily be restricted to students' perceptions of Israel and its military action in Gaza, but also extend to their views regarding civic rights, sexuality, even world history. The administration's stance against a storied institution such as Harvard University indicates that it will go to any extent to enforce its writ on academia. There is pushback from the judiciary—a federal judge has stalled the department of homeland security's cancellation of Harvard's licence to enrol foreign students—but the administration has refused to back down. Its intent is clear: Campuses must stay clear of radical politics, and education should restrict itself to academic work. Profiling at the stage of visa interviews will enable the establishment to filter students early and restrict entry to those holding views that are an anathema to the administration.

This pivot can have political and economic costs. First, foreign students contribute significantly to the US economy—research by NAFSA: Association of International Educators reported that this cohort added $43.8 billion to the US economy in 2023–2024 and supported 378,175 jobs across the country. This is a large talent pool that has historically contributed to building the US's economic and technological prowess. Second, liberal US campuses are flagbearers of American soft power, which has historically given the West its edge over authoritarian ideologies. From the time of the Cold War to the rise of China, US campuses with their willingness to recognise free speech and the right to association have influenced young people across the world—from the Soviet Union and Eastern Europe to Iran and China—to privilege liberal democracy over authoritarian welfare systems.

The American dream has not just been about making money but is also about freedoms. Enterprise and innovation thrive when personal freedoms, including the right to speech and political choice, are protected. Universities with diverse political views and ideas contribute to this ecosystem. The visa action threatens to undermine this. A hostile bureaucracy will drive students, including from India, to explore campuses elsewhere: More Indian students are now looking to Europe, evident from the substantial rise in enrolments in universities in Germany and France.

INDIAN EXPRESS (P-10), 29 MAY 2025

BREAK FROM THE GRIND

IIT Delhi's new curriculum puts students first, prioritises an academic model grounded in empathy, innovation, adaptability

IIT Delhi's decision to revamp its undergraduate curriculum marks a much-needed shift in Indian higher education — from relentless academic pressure to thoughtful, student-centric reform. By reducing credit loads, introducing smaller class sizes, and embedding interdisciplinary flexibility into the learning experience, the institution is acknowledging an uncomfortable truth — excellence cannot come from rote learning or at the cost of mental or physical well-being. The revised curriculum, to be introduced from this academic session, has made pivotal changes: It emphasises hands-on learning to ensure students gain practical experience alongside theoretical knowledge. Smaller classroom sizes — especially critical in the first year for those transitioning from vastly different educational environments — offers the promise of stronger faculty-student engagement. It will also offer integrated courses and options to change branches after year one, based on merit. The integration of sustainability modules across various disciplines reflects a forward-thinking approach, aligning education with environmental concerns. Additionally, the incorporation of emerging technologies like AI and machine learning into the curriculum ensures that students are equipped to navigate and contribute to the evolving technological landscape.

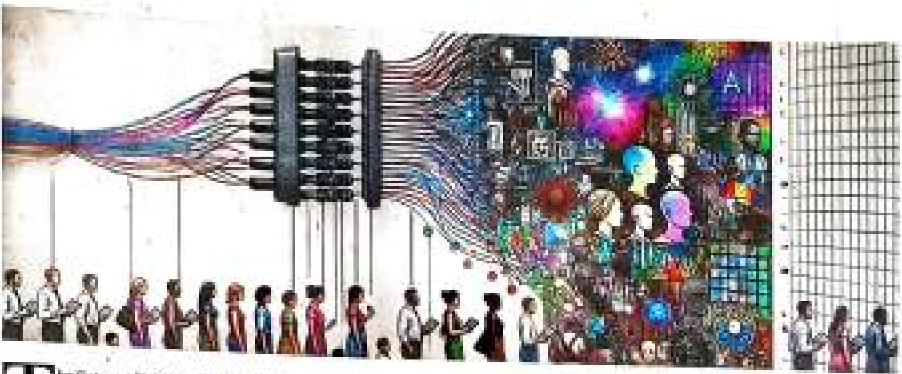
The revamp, which comes after 12 years, is more than administrative housekeeping — it's a response to a crisis that elite Indian institutions have struggled to confront. In 2023–24, six students at IIT Delhi died by suicide, part of a grim national pattern. Behind these numbers are stories of young minds buckling under pressure in an academic system that too often conflates merit with endurance. Years of grinding at coaching centres, rigid curricula, hypercompetitive environments, and an assembly-line model of education create a perfect cocktail of burnout and mental-health crises. An internal committee set up by IIT Delhi last year identified key structural stressors, that include post-coaching fatigue, unforgiving grading systems and persistent caste- and gender-based discrimination, especially for first-generation learners and students from marginalised backgrounds.

Over the past couple of years, however, IITs have worked to dismantle the myth that the path to excellence is necessarily punishing or linear. By setting up a sports scholarship at IIT Madras and implementing a supernumerary quota for women in their undergraduate engineering programmes, IITs have risen to the task of reimagining higher education as inclusive, diverse and future-ready. IIT Delhi's curriculum reform builds on this foundation. A lot now rides on the implementation. But in moving away from rote learning toward an academic model that values curiosity, well-being, and personal growth, it grounds its vision in empathy, innovation and adaptability. That is a crucial — and necessary — first step.

STATESMAN (P-6), 29 MAY 2025

The AI challenge

AI-generated skill-biased technological change is going to adversely impact the demand for routine, repetitive tasks commonly concentrated among low- and middle-earning unskilled workers having limited judgement and low cognitive skills. The displacement of workers is particularly harmful to less-educated and vulnerable groups who will face more difficulties in finding alternative jobs and are more likely to be exposed to low-stability, low-wage, and high-turnover occupations



The Future of Jobs Report 2025 manifests the transformational effects of the emerging artificial intelligence (AI) and machine learning technologies towards reshaping economies and societies over the coming decade. Risks of job displacement, societal polarisation and economic downturn, particularly, for emerging and developing economies, are looming large.

An estimate from the International Labour Organisation (ILO) points out that globally nearly 75 million jobs are at risk of automation on account of AI. Another report, from Goldman Sachs, says nearly 300 million full-time jobs will remain exposed to AI-driven automation. It is anticipated that by 2030, AI and other information processing technologies will transform 86 per cent of businesses, sparking the creation of 170 million new roles worldwide while making 92 million existing jobs redundant. The overwhelming anxiety among workers over displacement from the present job due to widespread adoption of AI can hardly be ignored.

The AI-based fourth industrial revolution projects highly specialised efficiency-driven cognitive-intensive roles of machines to simulate human learning and intelligence. Advancements in technologies, particularly AI and information processing, and automation are expected to have a divergent effect on jobs, fuelling demand for technology-related skills. It is expected that workers' existing skill sets will either be transformed or become out-dated over the 2025-2030 period. The superior efficiency of AI-enabled robots in performing tasks can lead to job displacement, as they can complete tasks rapidly, precisely and cost-effectively.

In the coming days, analytical thinking will remain the top core skill. This will be followed by resilience, flexibility, creative thinking, technological literacy and motivation along with leadership and social influence. The combination of cognitive and interpersonal skills emphasises the importance of having an innovative and collaborative workforce, where both problem-solving abilities and personal resilience are critical for success. Most likely, tasks previously performed by low-skilled workers are now going to face automation, leading to shifts in employment dynamics.

AI-generated skill-biased technological change is going to adversely impact the demand for routine, repetitive tasks commonly concentrated among low- and middle-earning unskilled workers having limited judgement and low cognitive skills. The displacement of workers is particularly harmful to less-educated and vulnerable groups who will face more difficulties in finding alternative jobs and are more likely to be exposed to low-stability, low-wage, and high-turnover occupations. Recent developments in AI have further stoked fears about large-scale job loss, stemming from its ability to automate a rapidly expanding set of tasks including non-routine cognitive tasks, and its potential to affect every sector of the economy. Firms use automation to maximise profitability by reducing production costs. The maximisation of profit approach shall risk a disruptive job market in emerging and low-income countries. The Indian labour market exhibits characteristics akin to a lower-middle-income country. India's working age population is nearly 972.8 million. The demography of the Indian labour market consists of informal, self-employed, contractual, and casual labour. Added to this list is also the formal sector, where temporary, casual, and so-called "contract workers" form a large and expanding part of the workforce, apart from a minuscule share of regular workers. Around 90 per cent of total workers in the economy are informally employed and nearly 82 per cent of the workforce is engaged in the informal sector. Self-employment continues to constitute about 58 per cent of total employment in the economy.

JOYDEEP BISWAS

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As per the India Employment Report 2024, due to the adoption of modern technology, the employment generation in the Indian production process has increasingly become more capital-intensive and labour-saving. Resultantly, growth in employment opportunities in the manufacturing sector remains stagnated at around 12 per cent of total employment.

The unemployment rate for individuals aged 15 years and above has been at 7.3 per cent and the underemployment stands at 7.5 per cent. In India, around 85 per cent of the total youth population, particularly young women, are not associated with education, employment or training. Moreover, 83.4 per cent of adults and 88.9 per cent of youths are in low-skill or no-skill jobs. Almost all of the youth workers in agriculture – around 98.9 per cent – and in construction – nearly 97.9 per cent – are either having no skills or low skills required for jobs in the manufacturing sector.

As in other parts of the globe, the challenges of new technological developments pave the way to the paradigm shift in the skills composition of work in India also. Jobs requiring high skills shall get prioritised over the low skills ones. Hence, wage inequalities and job polarisation shall become inevitable. Chances are there that the Indian labour market shall experience a gap between technological advancements and growth in wages which can better be referred to as "Engel's pause".

Given this backdrop, what will be the roadmap to bridge the gap between demand and supply of skilled labour? As India is striving for Viksit Bharat (Developed India) by its 100th anniversary of independence in 2047, such a huge unskilled workforce needs to be adapted with emerging AI technologies.

Technological advances are expected to drive skills change and disruption. There is no denying that emerging technologies need to be adopted to enhance labour productivity. But given the abundance of surplus labour in the country, a mechanism needs to be developed to upgrade the unskilled workers into skilled ones.

To navigate the challenges of significant skill disruptions among workers, it is necessary to increasingly finance reskilling and up-skilling initiatives to align workforce skills with evolving demands.

Up-skilling and reskilling the workforce emerges as the most common strategy. For example, the World Economic Forum's "Reskilling Revolution" addresses the growing need to transform education, skills, and jobs to meet the demands of a rapidly changing world. By uniting businesses, governments, and civil society, "Reskilling Revolution" seeks to build a fairer, more inclusive global economy, ensuring individuals and organisations are equipped to thrive in the future of work.

If India is to consider the effects of AI, actions need to be focused on strong institution building even if it is time-consuming and requires intellectuals, financial resources and supporting infrastructure.

As India's workforce in low-skill and low-value-added services remains vulnerable to AI, robust enabling institutions are essential for up-skilling and reskilling of labour to equip the workforce with the AI skills and knowledge and to strengthen the long-term skills ecosystem. Skills development and enhancement are essential to address skill shortages and skills mismatches among aspiring workers.

Moreover, active labour market policies such as vocational training, public works programmes, employment subsidies and apprenticeship training need to be imparted to the unskilled workforce in overcoming the skills supply and demand gaps. When it comes to funding of reskilling and up-skilling initiatives, the most common funding mechanism is free-of-cost training, followed by government and public-private funding.

Simultaneously, it must be a priority to improve public education systems in tune with AI and other emerging technologies. Initiatives shall also be taken to arrange alternative employment for displaced workers. Investment in green economies, care economies and digital economies that can create sustainable pathways of employment opportunity for youths.

The ILO asserts that with growing concerns around green technology and a sustainable environment, dedicated policies aimed at improving efficiency of workers with the contemporary technologies shall help to generate an additional 8.4 million jobs in the green sector for youth by 2030.

Indeed, in the Indian context, adoption of AI is in its infancy. This level playing field provides India the time to build the necessary institutions and infrastructure that will minimise disruptions and maximise societal benefits. At the same time, earmarking budgetary allocations is also necessary to improve the skills of unemployed people and for those workers whose jobs could be at risk from AI.

The future of work will be more influenced by technological innovations. Hence, building on the framework of the Digital Personal Data Protection Act, 2023, India must adopt the governance and regulation of AI to focus on social safety and security, inclusivity and human rights of the workers as well as prioritising efficiency-driven productivity for economic growth.

TELEGRAPH (P-9), 29 MAY 2025

COSTLY HALT

Are the prospects of university education in the United States of America for global students, including a sizeable segment from India, getting dimmer? An order from the Donald Trump administration, which seeks to halt visa interviews of new students as it considers the possibility of foreign students undergoing a vetting of their social media profiles as part of their applications to enrol in an American university, has heightened anxieties. A cable signed by the US secretary of state, Marco Rubio, the *Politico* reported, has apparently asked American embassies and consular offices to stop the process of scheduling interviews; this is the latest thrust in a wider assault by Mr Trump's government on American universities, especially on Harvard, and the country's much-fêted higher education system with anti-semitism and national security being used as the proverbial fig-leaf. The most likely consequence, if this step were to materialise, would be an immense disruption to the enrolment procedures of these educational institutions. Visa applications and, consequently, enrolments would get delayed. American universities, which are heavily reliant on foreign students to raise funds, would find themselves crippled when it comes to raising money for their functioning. Moreover, the existing screening process for students' visa applications is quite robust. An additional criterion — that of the scrutiny of social media profiles — raises ethical questions as well as the fear of curbs on free speech.

The developments must also goad the world in general and America in particular to examine the rhetoric and the motives that are being used to legitimise Mr Trump's infringements on higher education. Foreign students are more likely to pay full tuition fees, enabling US universities to generate additional funds that are, in turn, spent on American citizens and their welfare. Moreover, while international students benefit immensely from quality education in the US, their absence in the face of obstacles would greatly rob American educational centres of their global pre-eminence and campus diversity. Mr Trump's witch-hunt against this constituency therefore goes against the interests of the US that he claims to protect. It must be asked whether Mr Trump's real motive to wage this battle, as is the wont of authoritarian leaders, is to demolish the university as a citadel of free thought and fearless opinion. Indian students constitute a high percentage of applicants to American universities. The Indian government must take up the issue with its US counterpart to alleviate the plight of Indian students keen on an American education.

TIMES OF INDIA (P-18), 29 MAY 2025

On Campus, Trumper Tantrum

He won't stop at Harvard. But his war on universities isn't reasoned policy. No American goal is being served. Only self-goals. It's about throwing a fit at anyone who doesn't take the knee

Dan Cassino

Professor of Govt & Politics

Trump isn't going to stop at Harvard. Head of his DOJ antisemitism task force Leo Terrell has warned universities "on the east coast, on the west coast, in the midwest" that legal action could be headed their way too.

Last week, the Trump administration escalated his war on the most prestigious US university, announcing that it would no longer be allowed to enrol students from outside the country, and that all foreign students would be required to transfer immediately. This comes after a series of cuts to federally funded research at Harvard, amounting to hundreds of millions of dollars.

The administration claims these attacks are necessary to protect Jewish students from campus protests and protect white men from employment discrimination. What it really is, though, is power play. It's an attempt to destroy Harvard, or any institution that doesn't bend the knee to Trump.

To state the obvious, all this is wildly illegal. There is little doubt that the administration's actions will be blocked in court, and the only question is how much damage they'll be able to do beforehand. Harvard has filed a suit seeking to block the administration's action. The administration, in turn, is planning to take the battle all the way to Supreme Court.

The attacks also have a quality of incompetence, perhaps inevitable, given that they've fired everyone who knew what they were doing. Remember this wave of attacks on Harvard comes after the breakdown of its settlement talks with the administration.

Threatened with a loss of federal grants, Harvard agreed to new limits on campus protests, but negotiations ended when the administration sent a letter demanding that it be allowed to appoint an overseer for admissions, and that the school drop all attempts to recruit students who weren't white or Asian men, and that conservatives and Trump supporters be given preference in admissions and hiring.

The administration later claimed that these demands – signed by the White House negotiation team and sent through its lawyers – had been sent by accident. But the damage had been done. Harvard broke off talks, realising that there was nothing it could do that would satisfy Trump.

In some sense, this was the smartest thing Harvard could have done. As the administration demonstrated in its attacks on Columbia University, giving in to administration demands doesn't mean being left alone. Rather, it means being subjected to increasing demands, giving the administration more control. Refusing to take a win, as the administration did with Columbia, means there's little reason for anyone else to negotiate at all.

Chad Crowe (USA)

But aside from the incompetence of the administration, these attacks on Harvard are completely at odds with the administration's stated goals. Higher education is one of the US's biggest exports. More money comes to US from selling college to foreign students than from selling cars to other countries.

If the administration wanted to balance the trade deficit, it would be trying to bring in more foreign students, not scare them off. Trump has also made a point of how he wants more educated, wealthy immigrants, rather than labourers from what he refers to as "shithole countries". Visas for foreign students, allowing them to study in US, and stay for some time afterwards to find a job, are how US gets those educated immigrants.

So many of the policies that Trump claims will Make America Great Again are entirely counterproductive. Tariffs don't make America richer – they just make foreign goods more expensive for US consumers. Cutting food aid to other countries doesn't help people in US – it reduces our influence across the world. Crippling US higher education won't educate more students or stop protests against Israeli govt – it will accelerate the waning of US influence.

While they're only a small part of the US higher education system – Arizona State University outside of Phoenix has twice as many international students as Harvard – elite schools have an outsize influence on the soft power US projects around the world.

People around the world liked and respected US, wanted their kids to go to US universities, or wanted to emigrate themselves. Foreign policy scholars talk about the brain drain, which is the movement of the world's best and brightest to US, benefitting Americans while putting other countries at a disadvantage. Think, for instance, of the 60,000 doctors from India who currently practise in US.

In addition to the scientists, engineers and doctors who have made US the global centre of innovation for the past 80 years, there are real benefits to educating the children of the global elite. The fact that anyone with money or power wants to send their kids to Harvard or Yale or Stanford means there are generations of leaders around the world who like, or at least understand, America. Some of them stay in US, but we benefit from the ones that leave, as well.

What we're seeing out of the administration's fight with Harvard isn't any sort of reasoned policy. It doesn't help US, or any of the groups that Trump claims he's trying to protect. It's a temper tantrum, an attempt to wreck anything he can't control, no matter how little it makes sense, and done with the subtlety and clear thinking of a toddler throwing himself on the floor, pounding his little fists, and making demands that no one can quite understand.

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TRIBUNE, (P-6), 29 MAY 2025

Research reels under US fund squeeze

Several important projects have been wound up or curtailed, while scientists are losing jobs

DINESH C SHARMA
SCIENCE COMMENTATOR

OMINOUS: Cutting down 'wasteful expenditure' has been on Trump's agenda ever since he took over in January. REUTERS

THE Donald Trump administration has barred Harvard University from enrolling international students. Though US courts have put the order on hold, it has come as a big blow to the academic world in America and caused concern across the world. Harvard is not alone. Facing massive cuts in federal funding, several universities have announced a hiring freeze, laid off staff and stopped or curtailed admitting new graduate students.

Ever since the new administration took over in January, there has been talk of cutting down "wasteful expenditure and inefficiency." Among the sectors affected by this diktat, science and research have been the worst hit. The budgets of two major funding agencies of scientific research – the National Science Foundation (NSF) and the National Institutes of Health (NIH) — have been slashed. The proposals for next year call for spending cuts ranging from 40 to 55 per cent for the two agencies.

The impact of this funding squeeze has been severe. Several important projects have either been wound up or curtailed; scientists are losing jobs and those left behind face an uncertain future. NSF Director Sethuraman Panchanathan has quit — 16 months before his tenure was to end — following the termination of hundreds of NSF projects. NIH head Jayanta Bhattacharya was forced to address a Town Hall of staff to brief them about the evolving situation.

The crisis has repercussions in many countries, including India, as several institutions globally have joint projects with American institutions supported by research grants from the NIH and the NSF. In 2023, the NSF had some 200 joint projects in India.

Scientists are considered a national asset, especially in America, which built a formidable research and innovation edifice after World War II by welcoming talent from all over the world. For instance, Panchanathan studied at the University of Madras and the Indian Institute of Science. Thousands of scientists in universities across America and agencies like NASA are immigrants from India and other Asian countries.

As research projects are getting folded up, funding is drying up and scientists are being laid off, other countries with a good research base are trying to attract American scientists. Canada has launched 'Canada Leads' for early-career life sciences researchers from America. Research universities in France have started the 'Safe Place for Science' initiative for American researchers willing to relocate. Australia has announced the 'Global Talent Attraction Program' that offers competitive salaries and relocation packages.

The European Union has indicated that it would enact a law to ensure the freedom of scientific research and welcome American scientists under its 'Choose Europe for Science' plan. Germany's Max Planck Society, which works with researchers from across the world, has reported a rise in applications from America.

> India spends less than 1 per cent of its GDP on R&D, even as the National Research Foundation has a highly centralised structure.

It is being suggested that India should also seize this opportunity and welcome not only researchers of Indian origin but also other American scientists. If there are joint NSF/NIH-supported research projects facing the axe in America, the Indian partner institution could offer to take ownership and continue such projects in this country.

All such ideas are not new, only the context has changed. In the 1950s and 1960s, when India was building its scientific infrastructure, concerted efforts were made to attract global scientific talent at the institutional and national levels. This included scientists persecuted in their homeland.

British scientist JBS Haldane, who faced criticism at home for his Marxist and anti-imperialistic views, was offered a position at the Indian Statistical Institute, Kolkata. American physicist Bernard Peters joined the Tata Institute of Fundamental Research following his persecution in America. Political reasons apart, both PC Mahalanobis and Homi Bhabha attracted global talent at their respective centres due to their reputation in the international scientific community.

At the institutional level, the Council of Scientific and Industrial Research tried to get Nobel laureates as directors for its prestigious labs like the National Physical Laboratory in the 1960s. Attempts were also made to convince Nobel winner Har Gobind Khorana and future Nobel laureate S Chandrasekhar to return to India. The government created a 'pool' system for scientists returning from the West to facilitate their appointments in various labs and academic institutions. All such efforts had limited success. The reason — the legendary Indian red tape. Many scientists and technologists who joined the pool went back to their adopted countries and Nobel laureates politely turned down offers.

In the 1980s, a high-profile appointment of an overseas Indian was that of Sam Pitroda, but he was removed from his position unceremoniously after the regime changed, and the telecom centre he started went into a decline. Several other Indian scientists who returned in subsequent decades also left with bitter experiences with central and state-level bureaucracy.

At present, all that Indian scientific departments have to offer are fancily named schemes for overseas Indian scientists like VAJRA and VAIBHAV. A small number of scientists come, spend a few months and go back. Foreign scientists are not welcome under any scheme. For resident scientists, funding has become tough despite grandiose plans announced periodically for increasing funding for scientific research.

India still spends less than 1 per cent of its GDP on R&D. A new funding agency, the National Research Foundation, has been formed, but it has a highly centralised structure. The grant-giving mechanism is opaque and time-consuming. There is a massive erosion of autonomy in research institutes and universities. Research scholars and fellowship holders face long delays in the release of scholarships. Foreign travel and international collaboration have been restricted for academics.

Therefore, it would be a daydream to hope that American researchers would choose India for relocation, even though the evolving situation in the US certainly presents an opportunity for countries with a strong R&D base. As Eric Berton, president of Aix-Marseille University, has commented, American researchers are not looking for funding support but for the opportunity to continue their work with academic freedom. It is time for the Indian scientific establishment to introspect on these lines.

TRIBUNE, (P-6), 29 MAY 2025

Studying in America

Trump's orders are causing disruption

THE Trump administration's missive on halting the scheduling of new visa interviews for foreign students hoping to study in the US adds to the climate of uncertainty for the aspirants, their families and even the host campuses. It marks a significant expansion of the previous efforts to tighten immigration controls and impose restrictions on international students. The proposed social media vetting of visa seekers follows a crackdown aimed at sending back students who may have participated in protests against Israel's actions in Gaza. A variety of rules have also been invoked to cancel certifications and freeze funding of US universities, especially elite ones such as Harvard, that the administration believes are too liberal and accuses of allowing anti-Semitism to flourish. For the higher education community, the frustration is palpable.

India is one of the largest sources of international students in the US, and is particularly affected by the disruption. The American dream may not be crumbling, but it is certainly forcing many prospective students to rethink their study and research plans. Ideally, such a situation should present an opportunity to retain the extraordinary Indian talent. That, however, is wishful thinking and a reality check that the policymakers should not lose sight of.

Several universities in the US are not merely sites of great learning; they are torchbearers of the ideals of free speech and thought. The vastness such spaces provide to human endeavours in practically every conceivable field have made these campuses beacons of inspiration to the global fraternity of students, researchers and dreamers. The new policy mandates are unsettling and disconcerting. How to negotiate this altered landscape is the test of the times. The audacity of hope is what holds these institutions together, and not letting go of hope is the best response.

ASIAN AGE (P-5), 30 MAY 2025

How teaching has changed over the years: Much that is good in old & new

I have been a school educator for 55 years and have earned the right to comment on how school teachers have changed over the decades in my city, Kolkata. Writing this article will be a good exercise as I have to reflect on the relative qualities of the old and the new and discourage me from yearning for the "good old days". We can't really grumble about everything that is new nor claim that the past was "golden" in every way.

When I began my career, the teaching staff seemed a happy-go-lucky lot who just went about teaching their pupils what they knew themselves. We were certainly not well-versed in different pedagogical methods and strategies but read widely and tried to implement what we had learnt in our B.Ed. programme. We had a lesson plan, long-term and immediate goals and an interesting set of questions. I don't remember students asking too many questions, but they clearly enjoyed the lessons conducted with a generous dose of humour. Our students adored most of us and even on modern, well-informed mothers who are keenly invested in their children's education, they still rave about their old teachers.

Teaching methods comprised storytelling, anecdotal references, discussion, group activities and team games. Teaching aids included pictures, large maps, lab equipment, scales, weights and counters. Field visits and practical work were given due importance even then. Every student was provided a grounding in art and craft, needlework, music/singing, domestic science and physical education, and everyone had to study mathematics and science, apart from the social sciences, literature and on Indian languages at least till the secondary level.

My teaching career began by chance, not by choice. I was still pursuing my post-graduate studies but the Calcutta University MA exams were kept on hold for some reason. Meanwhile, my school principal called me to fill in for a Bengali teacher who was taking leave for her B.Ed. examination in Bhubaneswar. It was a given that I would accept the temporary teaching assignment as nobody said "no" to one's teacher in those days. Bengali was not my strongest subject. Within a couple of months, I was offered a permanent teaching position in January 1969 and I accepted the offer for the princely monthly salary of ₹300. I have happily remained in the teaching profession since.

Regarding the employment of teachers, it appeared there was a general lack of structure and professionalism. Training was not mandatory, but over the years it became a requirement. Any personable individual with college qualifications filled the bill provided she was a good communicator. Highly qualified candidates for the primary department were often rejected for being "overqualified". I am not sure this practice has changed much. There is a belief that people who have pursued higher studies are incapable of "coming down" to the level of primary children. My experience has shown you must have fine minds, a love (and understanding) of children along with appropriate training in methodology to make a good primary teacher. Far from impairing their mind negatively, higher studies will enrich it. Our youngest minds need the best teachers.

Teachers, and our expectations from them, have changed dramatically, especially in the last decade, with the mushrooming of schools following international curricula. Sometimes today's teachers appear a different breed altogether. They exude corporate professionalism and seem to be products of a commercialised education system where lucrative careers are the ultimate goals. But these "new age" teachers are simply experts in their profession. Their subject knowledge is unquestionable and they have mastered the art of conducting demo lessons. They show off their familiarity with technology, their techniques of asking and eliciting questions and are able to create a tremendous first impression.

The teachers who have received training from different international boards speak in an esoteric language full of jargon. Now I too have become well-versed in these expressions. Just listening to their conversations is an eye opener for those unfamiliar with contemporary learning strategies.

The evaluation process is clear and precise and each subject has its own assessment criteria, defining expectations at different levels. What I appreciate most is that the system is based on the meeting of standards and acquisition of skills and learning, not on outperforming other students. You overhear teachers peppering their talk with ATL, CBG, AI, POs and a host of other such terms, only known to their own group. It is actually worth finding out about "approaches to learning" skills, "criterion referenced grading", academic integrity and Artificial Intelligence in this career and predicted grades.

Having expressed my admiration for today's teachers, it is only fair to point out the distasteful face of today's professional educator. Talking money or discussing terms and conditions is certainly acceptable, but the intelligent way it is mostly done is objectionable. We should refrain that at last teachers are being wooed and courted, and even enticed with tempting pay packages and "perks". But it is not expected that they should bargain, sign on the dotted line and then not turn up and resort to other unethical practices. In general, they display a sense of inherent attitude and present themselves as competent, but cold and single-minded careerists.

These descriptions are definitely not to be taken literally. There are all kinds of individuals in between in both categories. This article, hopefully not facile, is meant to merely suggest an interesting contrast. Incidentally, I get along comfortably with teachers of yesteryears as well as those I have labelled "new age teachers".

The writer is a veteran school educator based in Kolkata

DECCAN HERALD (P-8), 30 MAY 2025

IN PERSPECTIVE

From chalkboards to chatbots

AI is transforming learning processes but it is important to ensure that teachers remain integral to this shift

MANSOOR ALI KHAN

As a new academic year begins, the landscape of education in India – and indeed across the globe – is undergoing a profound transformation. A significant driver of this change is the integration of Artificial Intelligence (AI) into our classrooms. What once seemed the domain of science fiction is now an everyday reality in schools, colleges, and learning platforms.

I've had a front-row seat to this transformation, both as an educator and as an observer of how students and teachers interact in real-world classrooms. We are witnessing not just a technological evolution, but a fundamental shift in how we approach learning, teaching, and assessment.

AI is not here to replace teachers; it is here to empower them. Traditionally, a large chunk of a teacher's time was consumed outside the classroom – designing lesson plans, framing question papers, grading assignments, and managing administrative paperwork. AI tools have begun to lift these burdens. Intelligent platforms now help teachers create curriculum-aligned lesson plans, generate adaptive question banks, assess student work with objectivity, and analyse learning outcomes. This shift enables educators to focus on what matters most: engaging meaningfully with students, nurturing creativity, and providing personalised attention.

The key lies in remembering that technology must work for teachers – not the other way around. AI should amplify the human aspects of teaching, not diminish them.

Despite these advancements, one enduring truth remains: no machine can replicate the emotional intelligence, mentorship, and intuition that teachers bring to the classroom. Especially during adolescence – a period of identity formation, emotional upheaval, and self-doubt where students need trust, empathy, and human connection.

Shows such as *Adolescence* offer a glimpse into the fragile complexity of these formative years. A teacher noticing a student's withdrawal, encouraging a child after failure, or simply offering a listening ear plays a role that no algorithm can fulfill. As we embrace AI, we must ensure that teachers remain central, not sidelined.

Perhaps the most promising frontier lies in AI's ability to personalise education. Imagine platforms that adapt to a child's learning pace, offer real-time feedback, and identify strengths and weaknesses with uncanny precision. This is already unfolding in different parts of the world and holds tremendous promise for Indian students.

For children with special needs, AI-powered tools such as voice-to-text converters, visual learning aids, and adaptive content are game-changers. In rural and underserved areas, AI can democratise access to quality education by translating content into local languages, offering supplementary tutoring, and providing resources that were once out of reach.

Globally, advanced countries have raced ahead, integrating AI into classrooms. India, by contrast, is still in the early stages of this journey. Currently, AI in Indian education is largely used to support teachers. But the next phase will see AI deeply embedded into the learning process itself. A large part of AI applications in education will hover around this personalised adaptive learning to assess each student's understanding and tailor lessons accordingly.

Services such as academic performance prediction and individualised education plan analytics can be provided as a support system for higher grades. Eventually, AI will become deeply integrated with the learner and not just the process of teaching. Students will learn to build and interact with intelligent systems from a young age. This is especially crucial as India positions itself as a digital economy leader.

Ethics and equity

With opportunity comes responsibility. The deployment of AI in education must be guided by core principles of inclusion, equity, and ethics. Policies must ensure that AI is a public good – accessible to all. We must also tread carefully with technologies such as facial recognition and brainwave monitoring. While they promise insights into engagement and attention, they raise serious ethical concerns around privacy and consent. Robust regulatory frameworks, transparent data use policies, and human oversight into AI's functioning must be non-negotiable.

As this new academic year begins, schools across India will continue to explore and expand their use of AI. AI can – and should – become a trusted teaching partner, easing workloads, enriching learning, and making education more responsive to every child's needs. But the heart of education remains unchanged. It is the spark in a teacher's eye, the warmth of a word of encouragement, and the patience to help a student grow. AI cannot replicate these. It should only make space for more of them.

The future of education is not about man versus machine. It is about man with machine. And in that union lies our greatest opportunity – to make learning more human, more inclusive, and more impactful than ever before.

(The writer is general secretary, Management of Independent CBSE Schools Association (Karnataka))

Aspirational Nuh, abandoned education

Haryana's Nuh district ranks the lowest in the State board examination results, which were released earlier in May. With a 45% dropout rate after Class 10, officials blame cheating, teachers cite staff shortage, and parents question the value of education amid poor employment opportunities in the State, Samridhi Tewari reports

Every day, Jitender Kumar, in his early 30s, travels from Bahadurgarh city to Otha village in Nuh district, Haryana, 131 kilometres away. Kumar is a Hindi teacher at the Senior Secondary School in Otha, and takes a bus and an auto to reach the children he guides.

It's a hot, humid day in May, just before the school breaks for summer vacation. Kumar rests his head on a plastic chair, under a fan placed inside a 10x12-foot classroom. The electricity may go off any time, and then the class will sometimes move to the shade of a tree.

The walls are blue, chipped; the grey cement floor is cracked, and students sit on a torn, dusty cotton mat, their bags beside them on the ground. The fan doesn't reach the corners of the room. As the bell rings for lunch, the children squat in rows. Each is given a *thali*: watery dal and some rice. There is very little space to move around, but the children behave as they would in any other school: playfully collapsing on to each other, some smiling, some bored.

Kumar tries to cool off after having spent a day juggling subjects he barely knows. A postgraduate teacher (PGT), qualified to teach Hindi in the senior school, he also muddles through the English texts with students of Class 12. There has been no English teacher here since December 2022. This year, Kumar taught 13 children; all failed in the Haryana School Education Board (HSEB) examinations.

In 2025, Nuh performed the worst in the results across Haryana districts. Class 10 recorded a pass percentage of 73.90 (up to 13,862 students appeared; 10,244 passed), as per Haryana's Education Department. Class 12 registered a pass percentage of 45.76 (only 7,588 students appeared; 3,472 students passed). The top results were from Rewari at 90.89% in Class 10, and Jind at 91.05% for Class 12.

Principals, teachers, and the administration are in agreement that the results were poor this time because the government has begun cracking down on cheating over the past couple of years. In the 2025 board examination, 399 UMCs (unfair means cases) were registered with the administration, compared to 598 in 2024, 1,813 in 2023, and 1,570 in 2022.

"The board displayed unprecedented strictness to curb the menace of cheating during the exams. Disciplinary action was initiated against 135 people, including 105 invigilators and 20 centre superintendents, for dereliction of duty. As many as 16 FIRs (first information reports) were lodged against 78 people across the State," HSEB Secretary Munish Nagpal says.

As per the district administration, Nuh has 117 senior secondary schools. Only 20 recorded a pass percentage of over 60, while 37 schools registered below 33%. In two schools, no child passed.

> Students get their names registered, and then go missing, or some come to school, and leave midway. This is a problem teachers face across Nuh
>
> MANJEET SINGH
> Teacher, Government Model Sanskriti Senior Secondary School, Nuh

Nuh's under-development

Nuh shares a border with Gurugram, considered Millennium City, with high-rise corporate offices and condominium complexes that come with swimming pools and lawns. Nuh, with approximately 88% of its population residing in rural areas, is located in the Aravalli hills. Roads have not reached here, water is scarce, and there is no university. The literacy rate in Nuh is 56%, out of which 73% are men and only 37% women. According to 2011 Census, the literacy rate in Haryana is 75.55%.

The district was once part of Mewat, but was carved out 20 years ago. Rajasthan, Haryana, and Uttar Pradesh intersect at Mewat, a belt of villages known to be a hotspot for cybercrime. There are over 10.8 lakh people in Nuh, predominantly the Meos, who are Muslim farmers, as per the district administration.

In 2018, the government think tank, NITI Aayog, pegged Nuh as India's most backward district. That year, Prime Minister Narendra Modi announced the Aspirational Districts Programme that aims to transform 112 of India's most underdeveloped districts.

The region's infrastructure is so poor teachers from other districts don't want to live and work here. In 2017, a Mewat cadre of teachers was started to tackle this. However, teachers from other parts of Haryana continued to be posted in Nuh. They go to court, citing the creation of the Mewat cadre for the area, to avoid coming here. Nuh's District Education Officer Ajit Sheoran says that with a new batch of the cadre joining from the next academic year, most Junior Basic Training (primary school) positions will be filled.

No school for daughters

Inside Sonkh Village in Nuh, 60-year-old Jarsheed lies down on his charpoy. His son sits next to him, while his daughters go about their day: one cleans the cows, another cooks. Jarsheed works as a labourer, but is finding it hard to work, given there are many younger men to do the same job. His wife, Hasan Bashri, 60, says the couple has eight daughters and a son. Haryana has a sex ratio of 879, one of the lowest in the country, as per the last 2011 Census.

Muskan, 19, is one of Bashri and Jarsheed's daughters. Two years ago, she scored 450/500, with a 93% in Hindi in the Class 12 board exams. "I wanted to study further, but my father didn't allow it. All my friends go to college; all my sisters studied only up to Class 8," says Muskan, looking down when she talks, almost in a whisper. "I wanted to become a Hindi teacher, but my father never allowed it," she adds, her face turning red.

Jarsheed, in his Mewati dialect, says, "Why should daughters study? They will get married, leave, and their husbands won't allow them to work. So what's the point?" While Jarsheed talks, his daughters neither interrupt nor argue. Bashri, who has never seen a classroom in her life, says, "My husband's thinking is problematic. Had we educated Muskan, she would have become an earning member and would have been able to help our family." Muskan shows off her laminated degree, then puts it back in her school bag she still treasures.

Low attendance in school

A few kilometres away from Sonkh village is the Government Model Sanskriti Senior Secondary School, the facade painted in the colours of the national flag. The school has adequate infrastructure to cater to students across age groups: a computer science laboratory, libraries, and a sports field. Yet, low attendance is a concern for the school.

Manjeet Singh, who has been teaching here for six years now, explains that the recurrent problem in Nuh is either truancy (missing school) or absconding (have not attended for long durations). "Students get their names registered and then go missing, or some come to school and leave midway. This is a problem teachers face across Nuh," Singh explains.

The school principal, Mukesh Kumar, has spent 29 years in the Mewat region teaching children. He says, "Most families send their children to school up to Class 12, so they can acquire a driving licence. Families aren't comfortable with the idea of letting their daughters leave home to study." He says children are trained to repair bikes or weld iron, so they are employable. "Not many come from families where education is discussed," Kumar explains.

While the pass percentage in his school among Class 12 students was 58, for Class 10 students this was 47%, Kumar says. "The pass percentage went down because the Haryana government cracked down on the cheating menace." Question papers are leaked at exam centres, or people scale walls to help with answers, or impostors appear for the examination, as per newspaper reports. Exams were cancelled at 10 centres this time, compared to 29 centres in the previous year. In 2023, the exams were cancelled at 40 centres, and a year earlier at 64 centres.

On February 27, the Class 12 English paper was leaked in Nuh and Palwal, minutes after the exam began. Outsiders reportedly took photos through windows and shared them online. At least four invigilators were dismissed.

The next day, the Class 10 Maths paper was leaked in Jhajjar and Nuh. While FIRs were filed, 25 police personnel, including four Deputy Superintendents of Police and three station house officers were suspended, and the HSEB Secretary replaced. Bhiwani, Jind, Jhajjar, Sonipat, and Nuh report cheating cases more frequently than other districts, say the police.

Nagpal says at least 226 flying squads were formed, and disciplinary action taken against 399 staff members. "The idea was to curb cheating. In 2022, at least 64 cases were registered. The next year 40 FIRs were registered, and in 2024, there were 39. This year at least 10 have been registered," Nagpal says, adding that police were stationed on the rooftops of exam centres and houses nearby to get a bird's-eye view. It's often the crowd outside that aids cheating, he adds.

A systemic challenge

Deputy Commissioner of Nuh Vishram Kumar Meena acknowledges the multiple challenges the district administration has. He says they will now work on ways to improve the system. "Cheating has become a 'cultural phenomenon' or a 'trend'. Almost everyone has become accustomed to the idea. The issue is so deep-rooted that when the Haryana government began to 'dismantle' the 'system', students dropped out of government schools," he says. Then they would take admission in Open Learning centres (flexible attendance), where they bribed government officials, Meena adds.

In 2023-2024, at least 4,446 students from Classes 1-8 dropped out of school, as per data from the Education Department. Meena also shares an instance where one of the Open Learning centres in Nuh conducted an examination and found at least 34 impostors appearing on behalf of other people. "Now that we are curbing the cheating menace, it's important to instil the idea of consequences in the minds of people, so they don't repeat this behaviour."

Meena talks about education as a part of a larger social structure. There aren't that many job opportunities in Nuh, and larger families feel forced to pick the boy child who performs well in school to continue education. So, the other children drop out. If they are boys, they begin working; if they are girls, they are married off. He emphasises that rather than blaming the people or the administration, "there are systemic challenges that we need to tackle".

A school for her

Meena says the district has a 22-25% shortage of teachers at both the primary and secondary levels. Teachers in Nuh also explain how the sarpanches, or village heads, haven't promoted the culture of education in their villages. Meena says, "Out of 325 sarpanches, we have terminated 12 and are conducting inquiries on 50 others for forged and questionable degrees."

In 2022, the Mewat Development Agency that looks after socio-economic growth, started working with nonprofits and began recruiting Shiksha Sahayaks or Teaching Assistants. Newly graduated teachers are paid a monthly salary of ₹17,000.

In Nalhar, Sakina, 40, squats on a cement floor to wash clothes. She uses stones to beat the grime out, under a hand pump. It is sunny, and she is sweating. Sakina dismisses a question about what she dreams of for her three daughters and a son, and goes back to washing her clothes. Two minutes later, in the Mewati dialect, characterised by the harsh sounds of the surrounding landscape, she says, "Who is bothered by what their children will do? Daughters will graze the cows and sons will become drivers. In our culture, women don't study. What is the need to?" For a fleeting second, her daughters pause their work.

HINDU (P-10), 30 MAY 2025

Rewriting the script of early childhood education

"Some kids win the lottery at birth; far too many don't – and most people struggle to catch up," said the Nobel Laureate Prof. James Heckman. This holds true for India as well where its employment problem is partly a consequence of this "lottery of birth". A child born in India has a one-in-five chance of being born into poverty, affecting their health, nutrition, learning and earning potential. Yet, there is a way to beat these odds. From the decision by Uttar Pradesh to hire 11,000 dedicated Early Childhood Care and Education educators for Balavatikas to Odisha launching Shishu Vatikas and Jachuipedi Kits, States in India are showing the way.

The Heckman curve was a powerful economic model that provided a simple yet profound insight – of the relationship between age and the rate of return on investments in human capital. Heckman found that every dollar invested in early childhood education yields a return that ranges from $7 to $12, with lasting impacts: children who receive quality early education are four times more likely to have higher earnings and three times more likely to own a home as adults. By age five, many gaps in outcomes – such as earning potential and quality of life –are already evident. Children often struggle throughout life if motivation and learning habits are not nurtured early.

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Luis Miranda

is the Chairperson and Co-founder of the Indian School of Public Policy and the Chairman of the Centre for Civil Society

Strategic investments in early childhood education and engaging parents will help young learners

Learning outcomes

Yet, India's ECE system faces three major challenges. First, children are not receiving sufficient instructional time. Nearly 5.5 crore children between ages three to six are enrolled in 14 lakh operational Anganwadis and 56,000 government pre-primary schools. However, Anganwadi workers spend only 38 minutes per day on preschool instruction, which is far short of the scheduled two hours, and only 9% of pre-primary schools have a dedicated ECE teacher. We are planting trees without the right care to help them grow. The effects are reflected in learning outcomes. The India Early Childhood Education Impact Study found that only 15% of pre-primary children could match basic objects, a skill essential for letter recognition in Class one. Similarly, only 30% could identify larger and smaller numbers, which are foundational for arithmetic. As a result, children often start formal schooling without the skills they need, with many bypassing essential ECE years entirely: 2% of three-year-olds, 5.1% of four-year-olds, and nearly one-fourth of five-year-olds are enrolled directly in Class one.

The issue of resources, engaging parents

Second, the thoughtful optimisation of resources for early childhood education remains a challenge. The Government of India spends only ₹1,263 a child annually on ECE compared to ₹37,000 a student on school education – largely on producing teaching-learning materials that are often underused. There simply are not enough teachers to implement these resources, and there is a lack of oversight – one supervisor is responsible for monitoring 282 Anganwadis. To improve oversight, we need targeted funding to hire more supervisors and dedicated ECE teachers. These measures, though modest, promise high returns.

Uttar Pradesh has now moved ahead on the hiring of nearly 11,000 ECE educators for Balavatikas in all districts. The State also organised a six-day residential training programme for 50 master trainers from 13 districts to train them on ECE pedagogy. Odisha has taken the decision to open Shishu Vatikas in all government schools to make children in the age group five to six school ready.

While increased funding would lead to immediate improvements, sustaining these gains depends on engaging parents, and here lies the third challenge. Most parents care deeply about their children's education but may lack guidance on supporting early learning. Empowering parents with simple, effective ECE practices can make a significant difference. For instance, providing worksheets or encouraging their participation in ECE centre activities can deepen their involvement.

In Madhya Pradesh, the monthly Bal Choupal programme engages with parents directly by showing them the importance of play-based learning. With smartphone access nearly universal, parental engagement can be further strengthened through WhatsApp or EdTech apps, allowing parents to support their children's development.

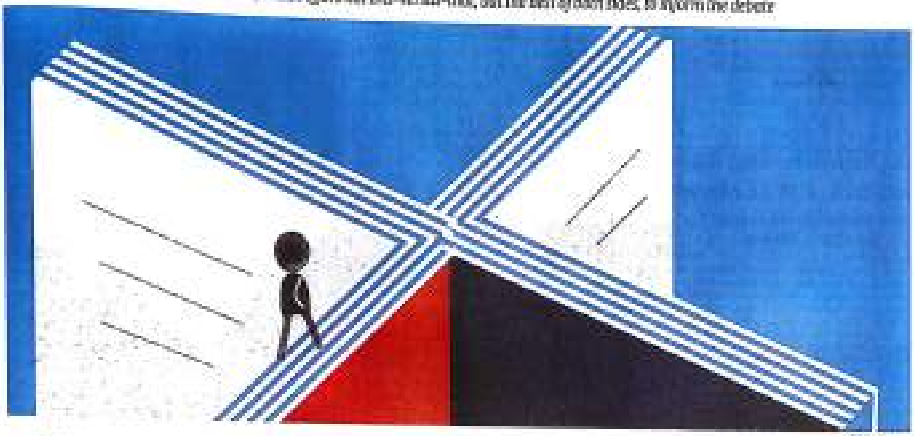
In perspective

Reversing these odds may seem like an uphill battle, but with targeted funding and increased parental involvement, we can provide our children with the foundation they deserve.

By 2047, over a billion Indians will enter the global workforce, presenting an unprecedented opportunity to reshape India's role in the world economy. Strategic investments in ECE and engaging parents in their children's learning journey could help 200 million Indians escape the lottery of birth and give today's young learners the chance to become tomorrow's leaders. This is a critical pathway to realising India's vision of becoming a true Vishwa Guru, empowering generations to come.

DIS/AGREE
THE BEST OF BOTH SIDES

A weekly column, which offers not this-versus-that, but the best of both sides, to inform the debate



CR Sasikumar

CBSE's new directive on the medium of instruction in primary schools has sparked a debate. Is the shift away from English out of sync with a rapidly changing knowledge economy?

Early learning needs mother tongue

Teaching in English from day one, especially to first-generation learners, often results in confusion and lower overall comprehension

SHAMBHAVI GUPTA

DURING A CLASS on "cultural capital", my students and I found ourselves discussing the role of the English language in the Indian context. [illegible]

> Critics argue that such a directive may disadvantage children later, given English's dominance in higher education and the job market. But this move is about the primary level, where the focus should be on building core literacy, numeracy, and confidence. The transition to English can still happen, but must take place thoughtfully

The writer is a sociology teacher in a Delhi school

English is language of aspiration

Students gravitate towards the promise of socioeconomic mobility. For many, English serves that purpose

SHAILAJA MENON

A FEW DAYS ago, we attended the orientation programme for our child's school. [illegible]

> In numerous families in India, parents belong to different regions, and the children speak multiple languages at home. Who decides which will be the mother tongue? Some languages do not have a standardised script. Then there are languages that exist only in an oral form. Will they be sidelined from pedagogy?

The writer teaches History at the School of Liberal Studies, Ambedkar University Delhi. The views expressed are personal

PIONEER (P-6), 30 MAY 2025

Editor's TAKE

Int'l student's American dream on the hold

The Trump administration abruptly freezes new visa interviews for international students, disrupting their academic plans

In a move sending ripples through global academic circles, the Trump administration has ordered a temporary suspension on new visa interview appointments for international students and exchange visitors. The decision — spearheaded by Secretary of State Marco Rubio — comes as part of a broader plan to expand social media vetting of all F, M, and J visa applicants. While US officials describe the measure as "temporary," its ramifications may be far-reaching, affecting students, US universities, and America's position as a global education hub. The State Department has directed US embassies worldwide to halt scheduling new visa interviews for student and exchange visitor visas, including the commonly used F-1 (degree programs), J-1 (exchange programs), and M-1 (vocational training). No timeline has been given for when new interviews will resume. The department cites a planned overhaul of screening and vetting processes, with expanded scrutiny of applicants' social media as a central feature.

The immediate impact is on students hoping to begin their studies in the US in Fall 2025. With the visa process already requiring weeks to months, this halt could mean delayed or cancelled plans for thousands of students who have already secured admission but not yet completed their visa interviews.

In the 2023–2024 academic year, over 1.13 million international students enrolled in US institutions, a record high. A staggering 71.5 per cent came from Asia, with India and China being the top contributors. For many of these students, this sudden freeze introduces uncertainty and potential derailment of life-changing academic and career plans. US universities stand to suffer significant consequences.

Institutions like New York University, Northeastern and Columbia rely heavily on international tuition revenue and research contributions. At Harvard, Yale and Northwestern, international students make up over one-fifth of the student body. Harvard, embroiled in recent tensions with the administration, had its approval to enrol new international students revoked just last week. Losing international students would impact not only financial bottom lines but also the diversity, innovation, and global reputation of these institutions.

Research labs, graduate programs, and cultural exchange efforts could all take a hit. While the official reason for the pause is national security and vetting improvements, but it may well be politically charged. The move comes amid escalating tensions between the administration and university campuses over pro-Palestinian protests and free speech issues. Though the administration maintains its focus is on safety and screening, incidents like this suggest a blurred line between legitimate security concerns and political repression.

The feasibility of this suspension rests on a complex balance. On one hand, enhancing vetting processes may be viewed as a legitimate national interest. However, the broad and undefined nature of this pause risks undermining the US's standing as a destination of choice for global talent. For now, students, universities, and global academic partners are left in limbo.

TRIBUNE, (P-7), 30 MAY 2025

Cutting financial aid to Harvard an act of self-sabotage

ADAM EZRA COHEN
PROFESSOR, CHEMISTRY AND PHYSICS, HARVARD UNIVERSITY

LAST week, I was among hundreds of researchers at Harvard University who received termination notices for our federal research grants. Mine was for a project to study electrical signalling between neurons in the brain. My lab research has led to progress in treatments for pain, epilepsy and ALS (Lou Gehrig's disease). We have been working to map the physiological basis of memory, enabling new ways to study Alzheimer's disease. All our work is available for the public to see.

I am a long-time member of the Harvard community (18 years on the faculty, plus four years as an undergraduate), and I am visibly and proudly Jewish. The government's decision to withhold federal funding in the name of combating anti-Semitism is wrong, bad for Jews everywhere, and terrible for the US.

Yes, anti-Semitism on the campus is real and must be confronted. Harvard's recent report on the matter documents harrowing incidents of bias and harassment. But in my 22 years here, I have never personally encountered anti-Semitism. From many conversations with Jewish students and colleagues, I am confident that Harvard is and has been a welcoming and supportive home for the vast majority. The problem of anti-Semitism is serious but not systemic.

A proportionate and effective response requires local knowledge and nuanced leadership, exactly the sort that Harvard's president, Alan Garber, provides. His Presidential Task Force on Combating Anti-Semitism and Anti-Israeli Bias, and the parallel Presidential Task Force on Combating Anti-Muslim, Anti-Arab, and Anti-Palestinian Bias, studied these problems extensively and provided strong recommendations that strike a thoughtful balance between the demands of free speech and protections against harassment. Some are already being implemented.

By contrast, US President Donald Trump's administration is seeking to destroy Harvard, and its assertion that it is doing so to combat anti-Semitism effectively pins the blame for the wreckage on the Jews. Whatever the administration's intent, the effect is indistinguishable from genuine anti-Semitism.

GREAT HELP: Federal money has been subsidising research costs by supporting Harvard's graduate students, reserve

The intent, apparently, is to turn hatred towards Jews into a political weapon, associating it solely with the Left and portraying the Right as protectors of Jewish students, and hence America's Jews. The government's charges of anti-Semitism at Harvard and other universities have been supplemented with a litany of other accusations: that students are indoctrinated with leftist ideology; that academic standards have slipped; that Harvard's faculty and students are living fat off taxpayer dollars. Trump claimed, "Harvard can no longer be considered even a decent place of learning."

I invite any Trump administration official who thinks our academic standards have declined to sit for an exam in my class. If you can explain the quantum principles underlying the structure of the Periodic Table (like my 18-year-old freshmen can), then you can lecture me on academic standards. The notes for my graduate biophysics class are online. I challenge any reader to guess my political leanings from these notes (be careful, you might learn some physics while searching). My classes are the norm, not the exception.

> The US itself stands to lose because global leadership in science and technology will be ceded to China and other countries.

Trump supporters argue that, given its $53.2 billion endowment, Harvard doesn't need federal money. But the opposite is true. The endowment has been subsidising research costs by supporting graduate students, financing core facilities and providing funds to help new researchers get started. This support provides additional leverage for taxpayer investments in science. Every dollar of my grants is scrutinised. There is no fat. Overhead charges to federal grants pay for compliance with federal regulations, safety standards, and lab infrastructure.

The Republican Party that Trump leads has long championed local control, limited government and the free market, especially when it comes to education. For decades, US conservatives have fought for school choice, opposed federal overreach, and insisted that parents, teachers, and local communities — not federal bureaucrats — know best how to educate their children. These values should apply just as much to higher education as they do to primary and secondary schools.

Yet today, some of the same voices calling for decentralisation are applauding a heavy-handed federal effort to punish a private university, to dictate who gets to study and teach there, and to interfere in research funding decisions that have traditionally been merit-based and apolitical.

The federal government has no more business telling Harvard who it can admit or hire, or what its faculty can teach, than it does setting the curriculum at my kids' public school. Students come to Harvard to learn; if we don't deliver, they will go elsewhere. If Harvard faculty doesn't produce valuable research, it will lose grants. The academic marketplace is self-correcting, and it is fiercely competitive. When government steps in to micromanage that system to score political points, it undermines the principles conservatives have defended.

In the short term, the people most affected by the Trump administration's funding cuts are not tenured professors, but rather early-career scientists, postdoctoral researchers, and graduate students, very few of whom have any connection to campus activism.

In the long term, the US itself will be worse off, both because of the discoveries that don't happen and because global leadership in science and technology will be ceded to China and other countries.

The US needs more research funding, not less. Federal investment in science — at Harvard and other US universities — is an investment in a healthier, wealthier, and more secure future for Americans of all backgrounds and beliefs. Cutting it off is a wanton act of self-sabotage.

DECCAN HERALD (P-6), 31 MAY 2025

IN PERSPECTIVE

Roadmap for reconciliation

The UGC should assume an advisory role, reinstating the operational autonomy of state universities

S N HEGDE

The University Grants Commission (UGC) was established in 1956 based on the recommendations of the Radhakrishnan Commission Report (1950) through an Act of Parliament. The major mandate assigned to the UGC was to monitor the higher education landscape and to ensure minimum standards. In 1976, the subject of education, including higher education, was transferred from the state list to the concurrent list. Since then, the central and state governments have been administering both school and higher education.

In exercise of the powers vested in it, the UGC has been providing guidelines and promulgating regulations encompassing various aspects such as syllabi, pedagogy, evaluation, autonomy, the appointment of vice-chancellors (VCs) and faculty, new courses, and pay scales of teachers. Different state governments have incorporated some (not all) of the UGC recommendations for implementation through their Acts and Statutes. Many of these suggestions remained unexecuted, apparently, due to constraints of state universities in putting up good infrastructure apart from human, financial, and material resources. However, until recently, there has been fairly good synergy by way of cooperation and compliance between the UGC and state universities, operating in a federal setup.

The introduction of the New Education Policy (NEP) 2020 and its hasty implementation triggered a great deal of confusion, controversy, and contradiction as states such as Karnataka, Kerala, Tamil Nadu, West Bengal and Punjab (with non-BJP governments) are opposed to many prescriptions conceptualised by the policy. This is largely because the states insist that it is their prerogative and privilege to have educational policies of their own and hence, have bluntly rejected the imposition by the UGC. The impasse turned worse recently when the UGC circulated the draft regulations on the appointment of VCs wherein the state governments are stripped of their authority to nominate one member (who acts as chairman) of the search-cum-selection committee. Exclusion of state governments is held as a direct onslaught by the UGC on the autonomy of state governments. The controversial issues have legal implications as they relate to centre-state relations in a federal setup on a subject falling in the concurrent list.

The following steps towards a functional rapport between the UGC and state universities might pave the way for a harmonious partnership resulting in better quality of higher education not necessarily imparted only by a few islands of excellence like IIMs, IITs, NITs, and the IISc.

The UGC should assume the role of a facilitator, advisor-mentor and watchdog, leaving to state universities the implementation of their guidelines/regulations. Universities have diverse characters in terms of governance, infrastructure, finances, faculty, and other requisites. Any tangible set of regulations should have an adequate timeline for higher education institutions (HEIs) – especially the ill-equipped ones – to explore the feasibility of the implementation. The roles of UGC and state universities should be complementary and not contradictory.

Support beyond guidelines

Mutual coordination, cooperation, and consensus should prevail instead of dictatorial approaches and consequential revolts. UGC recommendations should necessarily accompany a package of financial assistance to empower the state universities. The apex body cannot merely be ritually suggestive but needs to be effectively supportive as well.

The UGC should encourage state universities to base their agenda of development superimposed with the quality benchmarks set by the NAAC. Grants from the UGC could be commensurate with the academic status of HEIs. It is time the UGC adopted a new paradigm of grant distribution to ensure that well-performing state universities obtain substantial support.

All state universities shall endeavour to comply with the feasible suggestions of the UGC. It should be borne in mind that there is no substitute for quality, and in the present competitive scenario, no HEI can offer poor education in a substandard setup – an exercise that will nurture intellectual bankruptcy.

The UGC should adopt a level-playing field for the expansion of higher education as the present policy discriminates between a state university and a deemed-to-be university in provisions such as opening off-campus centres.

The NEP is a good document by vision and design with novel concepts of multidisciplinary and interdisciplinary course delivery. But the stark reality is that colleges affiliated with the universities (barring a few in metropolitan areas) are unprepared for offering a four-year honours programme with multiple exits and entries.

The need of the hour is constructive interaction between the two principal stakeholders to ensure quality higher education coupled with productive knowledge and employable skills.

(The writer is a former vice-chancellor of the University of Mysore)

HINDU (P-8), 31 MAY 2025

Don't merely enrol students, but equip them with skills

As the admission season for colleges and universities begins, institutions across India are once again promoting their programmes under banners promising knowledge, transformation, and research excellence. This growth in enrolment at the undergraduate, postgraduate, and PhD levels suggests a dynamic academic landscape full of potential. Yet, beneath this expansion lies an important challenge: degrees are proliferating faster than meaningful job opportunities.

Gourishankar S. Hiremath

Teaches Economics at IIT Kharagpur. Views are personal

A gap that needs attention

According to data released by the Ministry of Statistics, the unemployment rate in India tends to increase with higher education levels. This paradox reveals a critical gap between academic achievement and employability – a gap that requires urgent attention.

This challenge is particularly acute in India's vast network of non-elite institutions in Tier 2 and tier 3 colleges, where most students pursue BA, BCom, or BSc degrees and their corresponding master's programmes. These institutions often face resource constraints and limited industry connections, operating with curricula that have not kept pace with the evolving job market. While elite colleges make headlines for placement challenges, the gradual erosion of employability in everyday colleges often goes unnoticed.

In many such institutions, instruction remains largely theoretical, with limited emphasis on real-world skills. For example, an English literature student might study Shakespearean tragedy yet miss out on learning practical skills such as writing professional emails. Similarly, an economics graduate may understand complex theories but struggle with everyday tools such as Excel. This disconnect means millions of educated young people find it difficult to translate their degrees into career opportunities.

This situation stems partly from a deeply entrenched academic culture that values scholarship and abstraction over practical application. Within many academic circles – even prestigious ones – higher education is often celebrated as an end in itself, while immediate employment is sometimes subtly undervalued. Postgraduate degrees and PhDs are frequently pursued not just for intellectual fulfilment but as a refuge from the job market, creating a cycle where many graduates end up teaching in the very colleges that perpetuate the same system.

It is important to recognise that successive governments have acknowledged this issue. Initiatives such as Skill India, Start-Up India, and the National Education Policy have pushed for skill development, vocational training, and entrepreneurship. However, the transformation remains incomplete. Many undergraduate and postgraduate programmes continue to emphasise rote learning over practical skills. While new courses in AI or entrepreneurship are being introduced, they often lack depth, and integration into the broader curriculum.

Viewing education as a social contract that guarantees a meaningful connection between learning and livelihood is essential

A broader societal challenge

Countries such as China and Japan have successfully aligned education with economic strategies by elevating technical and vocational education to a central role in workforce development. In India, vocational training is still often perceived as a fallback option, both within academia and society. This stigma limits the appeal and effectiveness of skill-based education, despite its vital role in economic empowerment.

This contradiction highlights a broader societal challenge: degrees are highly valued as symbols of upward mobility, but they increasingly fail to guarantee it. This is not a call to abandon liberal education or abstract learning – they remain essential for critical thinking and creativity. However, education must also provide tangible economic benefits. Degrees should offer pathways to agency and dignity, especially for students from smaller towns and under-resourced institutions.

A way forward lies in integrating practical skill modules – communication, digital literacy, budgeting, data analysis, hospitality, tailoring, and health services – into general degree programmes as core elements, not optional extras. Doctoral education should be diversified to prepare candidates for policy, analytics, consulting, development, and industry roles, not solely academia. Research remains vital, but it must be pursued by those inclined towards it.

Finally, the widespread aspiration for government jobs reflects the limited opportunities graduates currently perceive. While these roles remain important, expanding private sector and entrepreneurial pathways through improved employability will offer youth a broader range of options. Enhancing skills and opportunities can reduce the over-dependence on competitive exams. India's growing economy demands an education system that not just enrols students, but equips students with skills. Viewing education as a social contract that guarantees a meaningful connection between learning and livelihood is essential. 31/5/25

TELEGRAPH (P-9), 31 MAY 2025

My debt to the American university

Under attack

POLITICS AND PLAY

RAMACHANDRA GUHA

Growing up in the India of the 1970s, I had ambivalent feelings towards America. I admired some of their writers (Ernest Hemingway was a particular favourite) and adored the music of Bob Dylan and Mississippi John Hurt. On the other hand, I was just about old enough to remember — and never forget — how Richard Nixon and Henry Kissinger had so energetically supported Pakistan against India (and Bangladesh) in the war of 1971.

In 1980 I moved to Calcutta, and my ambivalence turned to outright hostility. Under the influence of my Marxist teachers, I became actively *anti*-American. I expressed private and public disdain for their brashness, their gross commercialism, their imperialist (mis)adventures in Latin America and Southeast Asia.

Left to myself I would never have entered the United States of America. However, in 1985, my wife, Sujata, a recent graduate of the National Institute of Design, got a scholarship to do a Masters at Yale University. I could not stand in her way — the Yale graphic design department was reckoned to be the best in the world — but had to find a way to join her. Fortunately, I had come to know the historian, Uma Dasgupta, who then held a senior position at the United States Educational Foundation for India. With Umadi's advice and assistance, I applied for a visiting lectureship at the Yale School of Forestry and Environmental Studies, which — to my surprise — actually came through.

Sujata left for Yale in August 1985. In November of the same year, this confirmed anti-American found himself outside the US Consulate on Ho Chi Minh Sarani. The counter opened at 8.30 am — I was there at seven, partly out of anxiety, and partly because when I accompanied Sujata for her visa interview in Madras there was a long line outside the American Consulate there, curving right around Mount Road all the way to the Thousand Lights Mosque. But here there was just one person ahead of me in the queue. It struck me that the Tamils were not at all anti-American, and produced engineers in far greater numbers than the Bengalis. Besides, I was due to teach from the spring term, when fewer Indians sought to go West than in the autumn.

I reached Yale on January 2, 1986, and spent the next year-and-a-half expanding my mind, teaching as well as learning from my students. In retrospect, I am very glad I went to America when I did. Since I had done a PhD already, I was sure of the ground on which I stood. Meeting young Indian historians who had studied in America, I was immediately struck by how driven by fashion their work was. In the wake of Edward Said's *Orientalism*, post-colonialism and Cultural Studies were all the rage. In the two disciplines I knew best, history and social anthropology, sustained empirical research was not encouraged any more. Rather than spend months in the field or in the archive, these acolytes of Edward Said preferred to take out texts by dead white males from the nearest library and scrutinise them for their departures from what then passed for 'radical politics'.

The Indians of my generation who had come to America to study and teach had largely done so for personal advancement. But it was not so much for their opportunism that I shunned them; it was more that their intellectual concerns were not mine. The scholars I was attracted to worked on one or both of my subject fields — the environment and social protest — albeit in cultures and contexts other than my own. At Yale itself, I had long conversations with the environmental sociologist, William Burch, the environmental historian, William Cronon, and the ecological anthropologist, Timothy Weiskel. A senior Yale scholar whom I spoke with regularly was James Scott, who had just published what in my view remains the best of his many books, *Weapons of the Weak: Everyday Forms of Peasant Resistance*. Outside Yale, I made contact with the comparativist, Michael Adas, at Rutgers, the sociologist, Louise Fortmann, at Berkeley, and the doyen of American environmental history, Donald Worster, then teaching at Brandeis.

These scholars had worked on Africa, Southeast Asia and North America, using techniques and disciplines different from the ones to which I was accustomed. And, unlike established academics in Calcutta or Delhi, these American professors were refreshingly free of hierarchy. Though much older than myself, they were happy to be called by their first names, and happy to have their ideas critically assessed too. Meeting these scholars, and reading their works, expanded my intellectual horizons and enlarged my intellectual ambitions. Like them, I wanted to publish my PhD as a book, and get on to work on a second book, and then a third. Too many Indians I knew had written a fine first book and then rested on their laurels. On the other hand, Adas, Scott and Worster all had an impressive oeuvre, notable for its depth and its diversity. That was the model I wished to follow when I came back home.

One reason Sujata and I enjoyed Yale so much is that we knew that when she graduated, we would go back to our homeland. The other Indians at Yale were all desperate to stay on — which meant that they were anxious to take the right courses to get the right job that might get them a work visa and in time a Green Card. Because we had no such anxieties, we could take full advantage of all that this great university had to offer. And we made some close American friends, with whom we are still in touch.

In the four decades since we returned from New Haven, I have been back to the US many times. Most trips have been short — a week or two — but occasionally I have spent longer spells at universities on the East and West Coasts. I have the happiest memories of a semester spent at the University of California at Berkeley, where — at this great *public* university — the students were as intellectually sharp yet of far more diverse backgrounds than at Yale or Stanford. I was teaching a course on Mahatma Gandhi, and the interest shown in the man and his legacy by my Burmese, Jewish and African-American students convinced me that it would be worth my while to spend the next decade (and more) researching and writing about Gandhi.

I was myself entirely educated in India, and have spent the vast bulk of my life living and working in India. Yet, I owe an enormous debt to the scholars and students I have spent time with in America. And to the libraries and archives in that country too, which often contain priceless documents on the history of India unavailable in my homeland. I therefore feel a deep sense of anguish and anger at what Donald Trump is doing to wreck the American university system. Whether conducted out of ideology or personal spite, Trump's campaign is causing enormous damage to a country he leads and claims to love.

It is true that in recent decades, the American higher education system has committed some self-goals. Of these, two stand out — the capitulation to identity politics, which has greatly inhibited free discussion and constructive debate on campuses; and the decision to do away with the retirement age, so that scholars in their eighties and nineties are still there to teach (smaller and smaller) classes, maintain large offices, and retain voting rights over future appointments. That said, most of the best universities in the world are still in the US. By educating and influencing scholars from all over the world, they have enormously enhanced the country's soft power. And, perhaps more pertinently, they have nourished an apparently unending stream of scientific creativity, which has played an incalculable role in making America the most economically and technologically advanced country in the world.

Before I went to Yale in 1986, I had been for some time a critic of American foreign policy. In the years since, I have retained my strong scepticism of its government's intentions abroad. All through my life, the foreign policy of the US has been characterised by a mixture of arrogance and hypocrisy. Yet its universities are another matter altogether. They are an adornment to humanity, and motivated or ignorant attacks on them should be mourned by thinking people of all nationalities. Tel/31

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End Of Mom-Dad's American Dream

For decades, well-to-do Indian parents happily sent their darlings to US to get degrees & to 'grow up'. Trump's upended it all. Now parents are sleepless even after making kids delete social media accounts

Sandip Roy

Decades ago I went to a modest university in the United States. It wasn't an Ivy League school but it offered a teaching assistantship and a tuition waiver. My proud mother called all the aunts. My father called travel agents. Not just the immediate family, but aunts and uncles and friends, all trooped to the airport to see me off. It was a momentous occasion. Sociologists would call it brain drain but I was living out the professional Bengali dream.

I remember being both excited and nervous. It was the first time I, a sheltered Bengali boy, would live far away from home. I barely knew how to boil an egg. My mother later said the enormity only sunk in after the plane doors shut. Later that night she lay awake in bed and told my father "How will he manage all alone so far away?" My father told her "He will grow up."

The American Dream was about fame, fortune and academic excellence certainly. But for generations of Indians (of privilege) it was also about growing up. As US tightens the screws on immigration, Indians might need to slowly start figuring out new ways to grow up.

The Trump administration has launched a two-pronged attack on two pillars that made US a magnet for people like me – immigration and education. America was a country that prided itself on being built by immigrants who came with little except their brains and sweat. Who your parents were, or what gentlemen's clubs they belonged to, was irrelevant.

And it was a country where university meant a ferment of ideas. The South Asian Radical History Walking Tour of Berkeley tells the stories of women in saris, with paper bags over their heads, protesting outside the Indian consulate in San Francisco in 1975 during the Emergency in India. When the Indian consulate tried to get their names, the university refused to provide these. Today, chances are their student visas would have been cancelled.

This is not to say US wanted to let in fire-breathing activists. In his book *The Karma of Brown Folk*, Vijay Prashad writes that the South Asian immigrants post-1965 were "double state selected". They were the cream of the crop in India and the kind of would-be scientists, engineers and doctors US wanted. But they did not only get PhDs. They also, as my father put it, grew up.

Chad Crowe (USA)

Ian Bogost writes in *The Atlantic*, "Only in America could 'college' refer to the amalgamation of a coming-of-age experience and a credentialing service."

That is now being upended. Trump administration wants to make that international student selection process more stringent, even foolproof.

It has suspended visa interviews while it tries to figure out a way to audit the social media activity of applicants. Students caught up in any fracas, from political protests to missing classes, can find their visas cancelled although some of those cancellations have been reversed by courts. But US is making it clear it is not interested in students coming to America to "find themselves".

US Secretary of State Marco Rubio said thousands of visas have been revoked "but we probably have more to do." There were more than one million international students in US the past year and they contributed nearly $43.8bn to US economy according to NAFSA, the association of international educators. Rubio has stated that the "US govt's rigorous vetting does not end once a visa is granted."

I don't even remember my US student visa interview. Having secured admission and an assistantship, that had felt like a formality. I was more worried about whether I should take a pressure cooker to America.

Now a visa is just a first step. A friend's brother-in-law visiting US from India this year for a family wedding was grilled at the airport despite having all the documentation. "What gift are you giving?" the immigration official asked. He got in but the experience was so unpleasant, my friend decided to cancel his own US trip later this summer.

While US administration claims its crackdown is on support for organisations like Hamas, the general impression it's giving is that the old welcome mat is being rolled up. Not that it was ever fully welcoming. For example, from 1962-1990 US immigration law effectively prohibited gays and lesbians aka "sexual deviates" from entering the country alongside prostitutes, polygamists, paupers, alcoholics, drug addicts, the disabled and those who could not prove "good moral character".

In a sense America is still trying to determine the litmus test for what constitutes "good moral character" in 2025. India is now the "top sender" of international students to America, with 3.3L studying there currently, bypassing China according to the Open Doors Report 2024. Lakhs of Indians will scour the new regulations and try to fit whatever new rules US makes.

Thousands are probably deleting their social media accounts as we speak. Or perhaps this will spur a push for an "American Dream" type education right here at home.

But no matter where the policy finally settles, the wind has shifted. After he reassured my mother that I would "grow up" my father turned over and fell asleep, content that as he slept I would be landing in America and stepping into a new life. And I would manage. Today's parents cannot afford to be that sanguine anymore.

The writer is a novelist

NAV BHARAT TIMES (P-12), 31 MAY 2025

ग्लोबल टैलंट की राह रोक US पैरों पर कुल्हाड़ी मार रहा है

क्या भारत को महान बनाएंगे ट्रंप

विवेक वाधवा

अमेरिकी हितों के खिलाफ
- सिलिकॉन वैली स्टार्टअप्स में ज्यादातर के फाउंडर प्रवासी
- इंटरनैशनल स्टूडेंट्स का सालाना 40 अरब डॉलर का योगदान
- रिसर्च फंडिंग से हर राज्य में सैकड़ों-हजारों को मिलती है जॉब

लंबे समय से अमेरिका की ताकत का राज इस तथ्य में निहित रहा है कि दुनिया की सबसे शानदार प्रतिभाएं उसकी ओर खिंचती चली जाती हैं और वहां उन्हें न केवल आर्थिक संसाधन उपलब्ध होते हैं बल्कि साहसी रिसर्च इंस्टिट्यूशन का साथ भी मिलता है। मगर अपने पैरों पर कुल्हाड़ी मारते हुए राष्ट्रपति डॉनल्ड ट्रंप कदम-दर-कदम इस व्यवस्था को खत्म किए जा रहे हैं। अमेरिका के लिए यह इनोवेशन के सबसे सशक्त इंजन के धीरे-धीरे बंद पड़ते जाने जैसा है, लेकिन भारत के लिए यह एक टर्निंग पॉइंट साबित हो सकता है।

क्या है संदेश । हार्वर्ड यूनिवर्सिटी के इंटरनैशनल स्टूडेंट्स के एनरोलमेंट पर रोक लगाई गई है। फेडरल रिसर्च फंडिंग के 2.7 बिलियन डॉलर से ऊपर की रकम फ्रीज कर दी गई है। MIT को ग्रेजुएट एडमिशन में कटौती और रिसर्च स्टाफ की छंटनी करनी पड़ी है। कैंसर रिसर्च, क्लामेट साइंस और क्वांटम कंप्यूटिंग जैसे क्षेत्रों से जुड़े प्रॉजेक्ट या तो बंद किए जा चुके हैं या बाधित किए जा रहे हैं। हालांकि एक फेडरल जज ने हार्वर्ड के खिलाफ उठाए गए प्रशासन के कदमों पर तात्कालिक रूप से रोक लगाई है, लेकिन इनका जो असर होना था, वह काफी हद तक हो चुका है। इंटरनैशनल स्टूडेंट्स और रिसर्चरों की बिरादरी को साफ संदेश जा चुका है कि अमेरिका में अब उनका स्वागत नहीं होने वाला।

इनोवेशन इकॉनमी की जड़ें । नतीजा यह कि अमेरिका में इंटरनैशनल स्टूडेंट्स के एनरोलमेंट में भारी गिरावट आई है जो निश्चित रूप से दुर्भाग्यपूर्ण और दुखद है। ध्यान रहे, यूनिवर्सिटी साइंस में सार्वजनिक निवेश ने वहां न केवल चिकित्सा के क्षेत्र में जादू किया है और डिजिटल क्रांति को संभव बनाया है बल्कि एक पूरी इंडस्ट्री ही खड़ी कर दी है। नैशनल इंस्टिट्यूट ऑफ हेल्थ (NIH) और नैशनल साइंस फाउंडेशन (NSF) में निवेश ने बायोटेक, क्लीनटेक और नैनोटेक के फलने-फूलने में मदद की। डिफेंस रिसर्च एंड डिवेलपमेंट में DARP के अनुदानों ने हमें GPS और शुरुआती इंटरनेट दिया। देखा जाए तो ये अमेरिकी इनोवेशन इकॉनमी की जड़ें हैं। इन पर प्रहार करना वैसा ही है जैसे किसी बहुमंजिला इमारत के निर्माण के बीच में ही उसके नींव को तोड़ने लग जाना।

प्रवासियों का कमाल । सिलिकॉन वैली स्टार्टअप्स में आधे से ज्यादा ऐसे हैं, जिनका कम से कम एक फाउंडर प्रवासी है। इनमें से एक तिहाई फाउंडर भारतीय हैं। इयूक, हार्वर्ड और यूसी-बर्कली पर मेरी रिसर्च के मुताबिक भारतीय प्रवासी जितने सिलिकॉन वैली स्टार्टअप के फाउंडर हैं, ब्रिटेन, चीन और ताइवान के प्रवासी मिलकर भी उस संख्या तक नहीं पहुंचते। इन कंपनियों ने सिर्फ धन नहीं पैदा किया है, पूरी की पूरी इंडस्ट्री खड़ी की है। यह पाइपलाइन बंद हो रही है।

आर्थिक पहलू । इसका आर्थिक बोझ भी बड़ा भारी है। इंटरनैशनल स्टूडेंट्स अमेरिका की इकॉनमी में हर साल 40 बिलियन डॉलर का योगदान करते हैं। वे ट्यूशन फी भरते हैं, घर किराये पर लेते हैं, खाना खरीदते हैं और उनमें से बहुतेरे कंपनी लॉन्च करने की राह पर आगे बढ़ते हैं। रिसर्च फंडिंग से अमेरिका के हर राज्य में सैकड़ों-हजारों नौकरियां बनती हैं और भविष्य की इंडस्ट्री को सहारा मिलता है।

रणनीतिक पहलू । रणनीतिक लागत तो और भी ज्यादा है। आर्टिफिशल इंटेलिजेंस, बायोटेक और क्लीन एनर्जी के क्षेत्रों में अमेरिका का दबदबा ग्लोबल टैलंट को आकर्षित करने की उसकी क्षमता पर निर्भर करता है। इस व्यवस्था को कमजोर करने का मतलब सिर्फ यूनिवर्सिटियों की कमजोरी नहीं है। इससे ग्लोबल इकॉनमी में अमेरिका की स्थिति खतरे में पड़ती है।

भारत के लिए अवसर । इसके उलट, भारत ग्लोबल टैलंट को आकर्षित करने और टिकाए रखने के मामले में आगे बढ़ता दिख रहा है। इसके रिसर्च इंस्टिट्यूशंस विश्व स्तरीय क्षमता प्रदर्शित कर रहे हैं। भारत ने सस्ता वैक्सीन तैयार किया और नासा के बजट के मुकाबले नाम मात्र के खर्च में सफलतापूर्वक स्पेस मिशन संचालित कर रहा है। इसके पास अपना फलता-फूलता स्टार्टअप इकोसिस्टम है, वैश्विक पूंजी तक पहुंच है और एक ऐसी खूबी है जिसका चीन में घोर अभाव है - खुलेपन और बहस को बढ़ावा देने वाली लोकतांत्रिक व्यवस्था।

जरूरी कदम । भारत अभी भी इस स्थिति में नहीं है कि ग्लोबल रिसर्च सुपरपावर के रूप में अमेरिका की जगह ले सके। लेकिन यह इस स्थिति में जरूर है कि अमेरिका से विमुख हो रहे टैलंट और एनर्जी का फायदा उठा सके। यह बात अलग है कि इस अवसर का फायदा उठाने के लिए उसे बहत कुछ करना होगा। भारत को रिसर्च इन्फ्रास्ट्रक्चर में निवेश करना होगा, रेग्युलेटरी व्यवस्था बेहतर बनानी होगी और सरकार और निजी क्षेत्र के बीच सहयोग को प्रोत्साहित करना होगा। यही नहीं विदेशों में बसे भारतीय मूल के वैज्ञानिकों और विदेशी रिसर्चरों के आने की राह भी तैयार करनी होगी। सबसे बड़ी बात यह कि इसे रिसर्च को राष्ट्रीय प्राथमिकता में लाना होगा। ट्रंप भारत को फिर से महान बनने में मददगार हो सकते हैं।

(लेखक वायोनिक्स बायो साइंस के फाउंडर हैं)