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# Shameful neglect of government schools

The High Court has come down heavily on the "sorry state of affairs" of government schools in Karnataka, many of which lack basic infrastructure like drinking water and toilets. Referring to the data submitted by amicus curiae K N Phanindra, the court observed that 464 government schools did not have toilets and 87 did not have drinking water at a time when private institutions are providing mineral water to their students. All schools had toilets only in seven districts, namely, Chamarajanagara, Dakshina Kannada, Udupi, Uttara Kannada, Hassan, Kodagu and Mysuru. Kalaburagi topped the list of districts where students had no access to toilets and drinking water. This is not the first time that government schools have come under judicial scrutiny. In 2010, the court had directed the government to set up an expert committee to go into the problems faced by schools, prepare a scientific plan and submit a report within three months. Again, in 2019, the High Court had sought a response from the government after a sample survey conducted by the State Legal Services Authority pointed to the deplorable condition of schools. Besides the usual lack of toilets and safe drinking water, the report found that many schools did not provide access for the specially abled. Evidently, nothing seems to have changed over the years.

While education is a fundamental right according to the Constitution, the Right to Education Act makes it incumbent upon the state government to provide basic infrastruc-

**All children  
deserve high  
quality  
education**

ture, including an all-weather building with barrier-free access, separate toilets for boys and girls, safe drinking water, and a library and playground. But often, they exist only on paper. Most students in these schools are from disadvantaged groups, weaker sections and socially and educationally backward classes. Though the state is charged by the Constitution with providing good quality elementary education, government schools are in no way comparable to private institutions in terms of infrastructure and quality of teaching. This amounts to discrimination against the poorest of the poor. The High Court is likely to take a dim view of the continued non-compliance by the government and perhaps haul the officers concerned for contempt.

Unfortunately, the government does not treat education as a core sector, with the budgetary allocation hovering around just 12%. The new government, particularly Primary and Secondary Education Minister Madhu Bangarappa, should immediately address this problem and ensure that government schools are in no way inferior to private ones. Unless the less privileged sections are provided with high quality education, they will not be able to compete with those coming out of private institutions when it comes to higher education and jobs.

DN/16

# WHERE PASSION MEETS CAREER

*The post Covid-19 era has witnessed an extraordinary resurgence in the hospitality industry, surpassing all expectations. A degree in hospitality management opens up a world of rewarding job opportunities, providing students with a versatile foundation to pursue their professional aspirations*

ANINDITA ACHARYA

During the challenging times of the Covid-19 pandemic, travel seemed like a distant dream. The global health crisis forced us to remain confined within the four walls of our homes, yearning to see the skies and breathe the fresh air of new destinations. Amid these restrictions, many individuals found solace through virtual travel experiences. According to a December 2020 Statista study, 18 percent of respondents in the USA embraced virtual travel as a way to explore the world from the safety of their homes.

As the world gradually opened up post Covid-19 and travel restrictions began to ease, the travellers were back with a vengeance. The impact of this pent-up desire for travel can be witnessed in the projected growth of the global hotel and resort industry market. According to Statista, by the end of 2031, the global hotel and resort industry market is estimated to grow at a CAGR of 8.1% and reach \$1.27 trillion. This growth signifies a promising future for the hospitality industry.

Looking at 2023, it is anticipated that 2,934 hotels will open their doors across the globe, a significant increase compared to the 2,246 hotels opened in 2021. This surge in new hotel establishments indicates a positive outlook for the industry, fueled by the resurging demand for travel and accommodation.

Arjun Kaggallu, the general manager of Novotel Kolkata Hotel and Residences, enthusiastically stated that "this is the best time to be a part of the thriving hospitality sector". "With the world trending towards ChatGPT and Artificial Intelligence, the hospitality industry still thrives on relationships. Imagine a robot serving you tea. Would you feel a personal connection? Yes, there have been technological advancements like contactless travel, which has made the hospitality industry more lucrative, but still, the sector relies on human interaction and connection the most," said the general manager of Novotel Kolkata.

Hospitality management encompasses diverse industries like travel, tourism, food and beverage, accommodation, event management, and hotels. The field extends beyond the classroom, offering practical learning experiences. Diverse management subjects such as human resource management, operations management, project management, business strategy, property management, sales and marketing and leadership management are also taught. A bachelor's degree in hospitality management can land jobs like cabin crew, customer relation executive, guest service officer, executive search consultant, sales and marketing manager, human resources officer, retail manager, tour manager, tourism officer, business development



## SKILL SETS NEEDED

- » Communication
- » Patience
- » Leadership
- » Problem-solving
- » Self-discipline
- » Active listening
- » Politeness
- » Teamwork
- » Customer service
- » Time management
- » Multitasking
- » Adaptability
- » Creativity
- » Language
- » Networking
- » Cultural awareness

manager, event manager, hotel manager, and many more.

Dr Shafeli Joshi, head, Department of Hospitality Management, MIT-WPU, said a degree in hospitality and tourism management can help students to pursue a range of exciting and rewarding careers in the industry.

"The industry is experiencing continuous growth, driven by increasing travel and tourism worldwide, providing abundant job opportunities. Hospitality and tourism often involve interaction with people from different cultures and backgrounds, providing students with opportunities for global exposure, cultural exchange, and personal growth. The industry has expanded to include various diverse and specialised roles like sustainable tourism manager, destination manager, revenue manager, and digital marketing specialist. These evolving career options reflect the

industry's dynamic nature and offer individuals opportunities to explore their interests," she said.

According to Dr Joshi, careers in hospitality and tourism management have expanded beyond traditional roles. "Off-beat career options such as sommeliers, culinary tourism specialists, adventure tourism managers, ecotourism planners, and wedding planners have gained popularity in recent years," she said.

Prof M P Verma, Dean, School of Hospitality & Tourism, Sister Nivedita University, Kolkata, doesn't mince his words when he said the hospitality industry has resurged with renewed vigour and energy post-Covid-19, surpassing all expectations. "The pandemic initially cast doubt on the future of the hospitality sector. However, in the post-pandemic era, we have witnessed a remarkable resurgence in travel, bringing forth positive developments for the industry. This resurgence has

## OFFBEAT CAREER OPTIONS SUCH AS SOMMELIERS, CULINARY TOURISM SPECIALISTS, ADVENTURE TOURISM MANAGERS, ECOTOURISM PLANNERS, AND WEDDING PLANNERS HAVE GAINED POPULARITY IN RECENT YEARS

created a surge in demand for hospitality management professionals across various sectors such as hospitals, hotels, event management, and beyond. The versatility of hospitality management education opens doors to abundant career opportunities in diverse fields," he said.

The hospitality industry is rewarding but also needs a lot of hard work. You might end up working on most holidays or be required to do double shifts. A hospitality management student is thus taught to be flexible, multitask and work within a team. He/she also needs to have lead-

ership skills, critical thinking, and problem-solving abilities and should be good in communication and interpersonal skills. Also, time management is key.

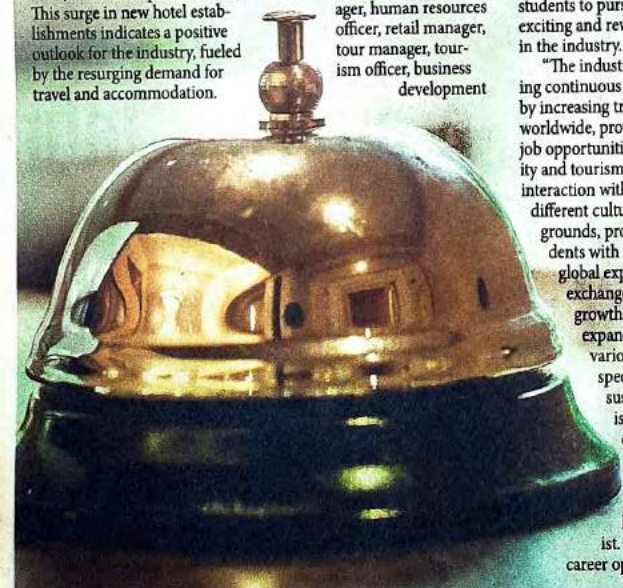
Swastik Nag, director, Canteen Pub & Grub, Kolkata and co-owner of Traffic Gastropub, studied engineering. However, his passion for the hospitality industry has been there since childhood. "I grew up with a dream of owning a restaurant, and that aspiration never faded away," he said. Given he didn't have a hospitality management degree, the initial days were challenging for him.

"Stepping into the hospitality industry without a formal educational background in the field did present its share of challenges. One of the initial hurdles was acquiring knowledge about the industry itself. I had to invest significant time and effort into studying the market, understanding customer preferences, and learning about the latest trends and best practices. I attended workshops, seminars, and industry events to gain insights and network with experienced professionals," he said.

In fact, Nag had to face scepticism from investors and stakeholders who questioned his ability to succeed without a hospitality-related degree. "However, I leveraged my engineering background to demonstrate my capability to analyse data, manage resources efficiently, and ensure a smooth operational workflow," he said.

Kumar Shobhan, general manager of Hyatt Regency Kolkata, started his career as a waiter. Despite being in the industry for 27 years, Shobhan said there hasn't been a day he doesn't feel excited to be a part of the dynamic hospitality sector.

"This industry requires a lot of passion. If you are not passionate about talking to a guest or serving a guest then it becomes challenging for anybody to survive. Also, the hospitality industry is about teamwork. We start our day early in the morning and end very late. But then, we also have a lot of fun," he smiled.



# Costly higher education a problem



SAPNA KUMARI

The escalating cost of education is denying higher education to students who wish to pursue it but cannot afford its prohibitive cost

**B**aban Bhagat, from Chand Kewari village in Muzaffarpur district in Bihar, works as a daily wage labourer in the nearby town. His meagre income barely covers the subsistence needs of his family, let alone the educational aspirations of his two sons. While his elder son's academic journey abruptly ended after completing Class 12, his younger son, due to lack of money, just managed to get enrolled in Class 12. "I have tried my best to provide education to both my sons, but our financial circumstances render it impossible for me to bear the equivalent expenses for both of them, even for an undergraduate program at an ordinary institution," lamented Baban. Presently, his elder son, a high school graduate, has also become a labourer, trapped in the same cycle of limited opportunities.

A recent official survey reveals how a significant increase in education expenditure in India, has placed a substantial financial burden on households. Particularly for those households from rural areas with minimal income, educating their chil-



dren becomes a burden than an investment, especially when it comes to girls. According to Pankaj Kumar, a resident of the same village, due to prevailing poverty, most children can only study up to the 10th or 12th standard. With the increase in enrollment and examination fees for graduation in government colleges, dropout rates have further aggravated. Awadhesh Kumar Das who works as a teacher in a private school in Muzaffarpur, emphasized that children from economically disadvantaged backgrounds face significant challenges when it comes to pursuing education in fields like engineering, medicine, or enrolling in coaching classes for exams like the Union Public Service Commission (UPSC) or Bihar Public Service Commission (BPSC). This difficulty stems from the increasing privatization of

educational institutions.

In recent times, several reports have raised concerns about the potential impact of the New Education Policy on the privatization of higher education, leading to increased costs that could make education unaffordable for many students. According to a report, the National Education Policy is designed to support a neo-colonial economic order, favouring those from affluent backgrounds while potentially discriminating against the poor and oppressed. Addressing similar concerns, Devesh Chandra, the former District Councilor of Muzaffarpur, expressed his apprehension that the new education policy could make it increasingly difficult for underprivileged children to access higher education. He emphasized the need for a comprehensive policy that ensures equal educational opportunities for all individuals, regardless of their socio-economic background. On the other hand, Ajay Kumar Singh, the District Education Officer of Muzaffarpur, reassures that the new education policy is designed to provide equi-

table education to everyone.

Whereas highlighting on dropping out of girls from higher education, Dr Shri Bhagwan Rai, an Assistant Professor at Babasaheb Bhimrao Ambedkar Bihar University, Muzaffarpur, believes the government and parents share equal responsibility for this situation. "The government can be held accountable for the expensive nature of education, as it has become a major obstacle for girls to pursue higher education. Additionally, parents cannot be absolved of their role in perpetuating gender disparities by treating the education of boys and girls differently," the Professor expressed. The escalating cost of education has undoubtedly presented formidable challenges for individuals seeking higher education, particularly impacting girls. It is crucial to recognize that girls are disproportionately affected by these financial barriers and encounter significant limitations in the absence of accessible, free, and affordable education.

(The writer is Charkha's  
Volunteer Trainer)  
**Charkha Feature**

# Higher education excellence must supersede accreditation

The certificate of accreditation should not be as important as the process that institutions are allowed to adopt and implement to attain excellence.

## OPINION

FURQAN QAMAR



Distant observers of higher education are astonished that the best higher education institutions in India are neither under the purview of the national level regulatory bodies nor are accredited by the national accrediting agencies. These include IITs, IIMs, IIITs, IISERs, NITs and many more. This is one of the strangest ironies and oddities of our higher education system. Permitted to self-regulate, they have attained excellence by global benchmarks, though they have not cared for institutional accreditation. Efforts are now on to bring them under the national qualification, credit and accreditation frameworks. They have succumbed to suasions and circumstantial compulsions. The move may address the

oddity, but the moot question is how would it impinge on their excellence? Academic excellence is an outcome of a continuous and persistent process involving strategies, initiatives and efforts to set benchmarks and achieve them sustainably. It essentially involves enhancing the quality of education and research within the academic institution. While institutional leadership, governance and management play a pivotal role in promoting excellence, the larger socioeconomic context and external environment are equally vital. Further, the dynamic nature and competitive landscape coupled with the compulsion for equity and inclusion make the task arduous and challenging.

At the fundamental level, academic excellence, reputation and brand-building revolve around funds, faculty and freedom. They are needed to create, maintain and effectively utilise the academic, physical, digital and intellectual infrastructure and resources. These constitute necessary conditions, but may not be sufficient in themselves. No amount of funding can guarantee academic excellence unless

the institutional leadership, management and governance are centred around integrity, transparency and academic priorities. Their academic standing, respect for diversity, appreciation for divergent points of view and commitment to excellence ought to be the hallmarks of leaders. So is the goal orientation and efficiency of operation. After all, how many resources one has is not as important as how efficiently they are put to use.

Faculty and researchers are essential, but their qualifications, quality and commitment to teaching, research and community engagement are more important than their numbers. The system, structure and processes must ensure that merit supersedes all other considerations and compulsions. The need and urgency for creating a culture of excellence is no less significant. Being the single most important determinant of academic excellence, faculty needs to be valued and invested in heavily. They ought to be provided opportunities for professional growth and continuous knowledge and skill enhancement opportunities. Supporting faculty in their pursuit of advanced degrees and encouraging research and publication can enhance teaching quality and contribute to the institution's reputation.

Academic, administrative and financial autonomy is crucial for promoting excellence. Autonomy does not mean freedom to do what-

ever one likes to do. It must, in fact, mean freedom to do what one is expected to do. Higher educational institutions, public or private, are expected to serve an important public purpose and that too as not-for-profit entities. Accountability is thus as essential as autonomy and is becoming quite consequential as higher education governance is shifting from collegiality to managerialism. Importantly, process-based and procedure-oriented accountability rather than enhancing excellence works the other way around. The quality of higher education is fund inversely proportional to the intensity of regulation for the simple reason that tighter regulation demands compliance, conformity, obedience and obedience and thus kills creativity and innovation.

An outcome-based, ethical, objective and transparent assessment and accreditation of higher educational institutions by an independent body has, therefore, been considered essential across the world. India has been no exception, but the agencies created for the purpose have neither been independent nor autonomous in the true sense of the word. The National Assessment and Accreditation Council (NAAC) is established as an inter-university hub and is strictly controlled by the University Grants Commission (UGC). So is the National Board of Accreditation (NBA), though it has recently been reorganised as a society and separated from

its founding agency, the All India Council for Technical Education (AICTE).

Accreditation plays a crucial role in building academic excellence by fostering continuous improvement and accountability. Accreditation serves as a critical benchmark for academic institutions, validating their commitment to high standards of education. Accrediting agencies evaluate institutions based on predetermined criteria, examining aspects such as curriculum, faculty qualifications, infrastructure, and student outcomes. By meeting or exceeding these standards, institutions demonstrate their dedication to academic quality. Accreditation assures students, employers, and the wider community that the institution has undergone rigorous evaluation and is committed to delivering excellence in education. Acceptability and success of accreditation, however, warrant the utmost degree of objectivity, transparency and integrity.

Most IITs, IIMs and institutions like them have attained a higher level of excellence compared to their counterpart universities. The differences in their performance are explained by three significant factors—the extent of funding, disciplinary varieties, and intensity of regulation. The situation would have been the opposite if accreditation had been as effective as espoused. This essentially means that the certificate of

accreditation should not be as important as the process that institutions are allowed to adopt and implement to attain excellence.

The driving factor probably lies in establishing clear academic standards and maintaining them with consistency, rigour, and relevance in education. By setting high standards, institutions challenge their students and teachers to realise their full potential and, thus foster excellence. Regular review and alignment of academic standards with industry requirements and societal needs ensure that graduates are well-prepared to navigate the evolving professional landscape.

Accreditation for the sake of accreditation may get a certification of accreditation, but may neither improve quality nor enhance excellence in higher education. As institutions of national importance are being bought under the ambit of national accreditation, it is important that the higher education accreditation system, rather than taming them conform to the laid down processes and requirements, make use of the opportunity to enable universities and other higher educational institution to learn and implement their best practices.

*Furqan Qamar, a former Advisor for education in the Planning Commission, is a Professor in the Faculty of Management Studies of Jamia Millia Islamia, New Delhi.*

# The life and times of B.El.Ed

Perhaps it is too early to write the obituary of this unique teacher education course. But its uncertain fate speaks of larger things



KRISHNA KUMAR

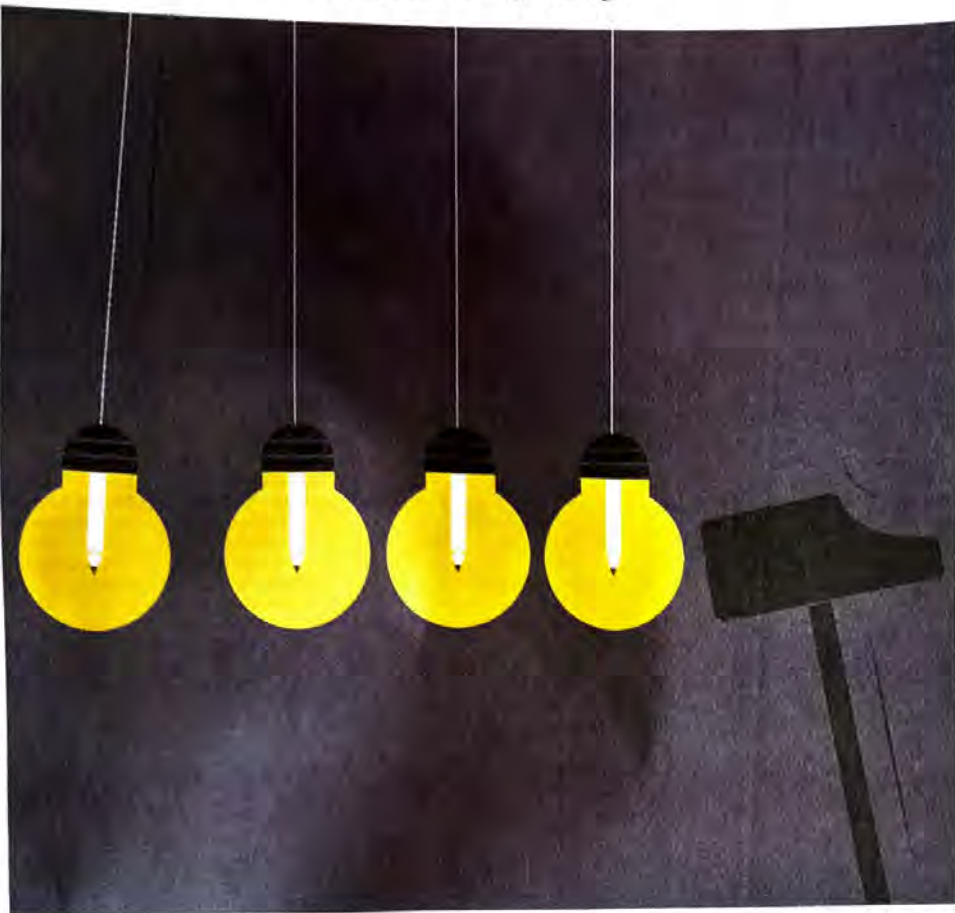
THERE WAS SOMETHING in its chemistry of ideas and information that made it different from any other course I had taught. In the mid-1990s, Jesus and Mary College (JMC) in the capital admitted the first batch of young women in this new course. For quite some time, people found its acronym name hard to pronounce, partly because it referred to an unfamiliar territory of knowledge: "Elementary Education". What does a university have to do with it, people asked when the proposal was placed on the agenda of the Academic Council of Delhi University (DU). The then Vice-Chancellor, Upendra Baxi, was a teacher and theorist of law. He successfully argued for its approval, and a course that gained global fame within a few years started.

Every Friday morning, I drove from the north campus to JMC across the city for a double period. I carried on for two years. The excitement of teaching the first batch of out-of-school students whose aim was to become elementary school teachers has survived intact in my memory. It is time to place it on record, when the B.El.Ed course is facing an uncertain future.

What is contemporary India like? Once it had settled in their minds, the question never stopped rocking the students. They wanted to discuss every shred of evidence they had picked up from their own life and from the other segments of the B.El.Ed. It was a roller-coaster chemistry of knowledge. An unusual ingredient of this chemistry was the analysis of the primary and upper-primary curriculum that the students were required to do. And then there was an investigative project to study the genealogy of an industrial product. The first year at college could hardly be more exciting.

The first batch graduated as the 20th century ended. By then, the course was running in eight colleges. Delhi's educational world noticed something uncanny as the B.El.Ed trained teachers started to get jobs. Principals felt their spark. Their grasp of school subjects was just as good as their knowledge of the way children think. Teachers trained by other, more conventional, courses also knew child psychology, but the B.El.Ed teacher understood that neither cognition nor learning can be dissociated from a child's social context.

School principals also noticed the indomitable spirit of these teachers. They refused to be defeated by lack of resources or by the gossip culture of staff rooms. Some of them returned to the university for Master's level studies. They qualified to become teacher educators themselves. In selection interviews, if a candidate used Piaget and Giroux while arguing, you could be sure that she had done B.El.Ed. I am not surprised that Giroux, one of America's celebrated social analysts of education, has signed a plea seeking the continuation of B.El.Ed. Other signatories include Christopher Winch, England's best known philosopher of education, Kenneth Zeichner, who holds the Boeing chair in teacher education at Seattle University, and Edward Vickers who holds the Unesco chair in Japan's Kyushu University. A few months back, Vickers delivered the Gijubhai memo-



C R Sankumar

nal lecture at JMC. The collective appeal made by these scholars to DU demonstrates the global fame of B.El.Ed.

They are puzzled why this world-class course should be threatened. It seems that DU wants to replace it with a course proposed in the new education policy. Why can't that new course be introduced in other colleges? DU has more than 70 constituent colleges. If B.El.Ed goes, it will be remembered as an innovation that made a mark but could not change the mindset. It made a breakthrough of the kind NCERT and NCTE could only fantasise about. In its short life of less than three decades, B.El.Ed faced every possible bureaucratic impasse. The strangest obstacles had to do with the term "elementary".

With Parliament's approval of the Right to Education (RTE), one assumed that, at long last, eight years of elementary education would become the norm. This expectation seriously underestimated the burden of history that India's system of education loves to carry. Every state, including Delhi, was used to the separate existence of "primary" and "upper primary" stages. Their separation is so sharp that a graduate teacher with B.El.Ed can't get the salary grade that goes with the label "Trained Graduate Teacher". To jump over this bizarre bureaucratic hurdle, B.El.Ed holders had to approach the courts. Within the university system, too, they had to fight for their right to get admission to the MA level courses of their choice.

They fought and they won. A few years ago, I was invited to take a few B.El.Ed classes in Miranda House. One of the activities I recall

The first batch graduated as the 20th century ended. By then, the course was running in eight colleges. Delhi's educational world noticed something uncanny as the B.El.Ed trained teachers started to get jobs. Principals felt their spark. Their grasp of school subjects was just as good as their knowledge of the way children think. Teachers trained by other, more conventional, courses also knew child psychology, but the B.El.Ed teacher understood that neither cognition nor learning can be dissociated from a child's social context.

doing was this: "Imagine that you meet India one day on the road. What question would you like to ask in your brief meeting?" One of the students wrote: "I will ask why do you (i.e. India) make us fight for every little thing?"

Perhaps it is too early to write the obituary of this unique teacher education course. I find it strange and sad that the new policy document does not celebrate the B.El.Ed as an outstanding Indian achievement in a moribund field like teacher education. But then, the policy does not acknowledge the past. Struggles and accomplishments are equally ignored, the assumption being that something totally unknown needs to be put in place. But if the policy's support for innovations is to be taken seriously, it must encourage DU to sustain one of its greatest recent innovations.

An international conference on teacher training held in Udaipur a few years ago acknowledged the problems this sector faces in many countries. In India, the late Justice JS Verma led a Commission appointed by the Supreme Court to inquire why teacher education is in such a sad state. His report provides deep insights and guidance for the future. It eloquently supports different routes for preparing teachers. The uncertainty that surrounds the B.El.Ed programme today is not entirely unusual in our "one size fits all" ethos. It has survived all these years despite continuous shortage of funds and faculty. Its lifelong struggle gives me the hope that it will continue to win renewed support from DU.

The writer is a former Director of NCERT

# Caribbean medical degree can lead to a career in the West

Pursuing medical education in a Caribbean university is a viable route to a career in medicine in the West, although it is not without its challenges



MAMTA PURBEY

In recent years, there has been a significant surge in the demand for doctors and the aspirations to pursue a medical career. However, the available resources and facilities have struggled to match the pace of this demand, resulting in a considerable gap. Consequently, numerous students have opted to relocate to different countries in search of admission to medical courses, as the distribution of requirements and available facilities remains imbalanced.

To pursue a medical career in the USA or Canada, students typically follow a structured path. Upon finishing their undergraduate degree, students are required to clear the MCAT exam as a prerequisite for admission to medical school. Once a student enters

medical school, they spend another 4-5 years in a medical school which would include their pre-clinical and clinical. Once the student is done with clinical rotations and graduates from medical school, s/he applies for residency. Students submit applications through the National Residency Matching Program (NRMP). Depending on the specialisation they opt for, many doctors complete their residency programs in 3 to 7 years.

To become a doctor in the US/Canada, students have the option to pursue a Caribbean medical college route. This involves selecting a reputable and accredited medical school in the Caribbean and completing a 2-year pre-med program, followed by 2 years of pre-clinical studies. The stu-

dents then continue their clinical rotations in the USA/Canada. Studying medicine in the Caribbean region offers a multitude of benefits for aspiring medical students aiming to become practising doctors in the USA, UK, and Canada.

These advantages make Caribbean medical schools an appealing choice for those seeking a top-tier education, practical exposure, and a unique cultural experience. Additionally, these medical schools hold recognition from esteemed international organizations like the World Health Organization and the Educational Commission for Foreign Medical Graduates, ensuring that graduates can practice medicine across all 50 states in the US or in the UK,

and Canada, among other various countries worldwide.

**Lower Financial Burden:** Studying MBBS at leading Caribbean medical colleges generally comes at a lower cost compared to US medical colleges, including both public and private institutions. While certain Caribbean colleges may have costs that approach those of US medical colleges, the overall expenses remain significantly more affordable.

**Hassle-free Admission:** Unlike other foreign medical universities, getting admission to top Caribbean medical colleges is less complex. Apart from decent credentials at the school level, you need to clear the country-specific medical entrance exam such as NEET in India. Most Caribbean colleges have rolling admissions

with three intakes- January, May and September.

**Diverse Learning:** Caribbean medical universities attract a diverse student population from various countries and cultural backgrounds. This multicultural environment fosters a rich learning experience, promoting cross-cultural understanding and collaboration.

**Gateway to the US:** The Caribbean region is globally recognized for its esteemed medical schools. These institutions hold accreditation from prominent international organizations including the Caribbean Accreditation Authority for Education in Medicine and Other Health Professions (CAAM-HP), World Health Organization (WHO), and the Educational

Commission for Foreign Medical Graduates (ECFMG). Such recognition empowers graduates to pursue medical practice in diverse countries across the globe. International medical graduates (IMGs) have a vital role in the American healthcare system, making up 25 per cent of the existing U.S. physician workforce. Among these IMGs, 18 per cent are graduates of Caribbean medical schools, indicating that approximately 4.5 per cent of licensed doctors in the U.S. obtained their MD degrees from Caribbean institutions.

**Accredited Medical Schools:** While choosing a Caribbean medical school, it's very important to check the recognitions and accreditations to ensure quality edu-

cation. Only schools that are recognized by CAAM-HP and accredited by the US Dept of Education, New York State Education Department and other US & Canadian medical education-related departments/bodies should be chosen to ensure a smooth transition into USA / Canada.

Pursuing a medical education at a Caribbean medical school offers a viable route to a rewarding career in medicine, although it is not without its challenges. While the entry requirements may be less stringent compared to those in the US, achieving exceptional grades and excelling in USMLE exams are still essential for securing a position in an American residency program.

*(The writer is Associate Vice President, Student Acquisition - International, American University of Antigua College of Medicine)*

# Stop playing politics with school textbooks

**T**he newly elected Congress government has decided to review the school curriculum. A similar exercise about a year ago had led to charges that the BJP regime then in power had saffronised textbooks. During its previous term in office between 2013 and 2018, the Congress government had appointed a committee under eminent writer Baragur Ramachandrappa to revise textbooks, which in turn set up 27 subject committees with nearly 130 members. Subsequently, after Basavaraj Bommai became the chief minister in 2019, another committee was constituted under the chairmanship of Rohit Chakrathirtha, a strong right-wing ideologue. While academics questioned his credentials to head such a committee, the then primary and secondary education minister B C Nagesh had said the Chakrathirtha panel would only correct certain discrepancies that had crept into the syllabus.

The immediate provocation for setting up the panel was a complaint by the Brahmin community that some passages in the social science textbooks hurt their religious sentiments. The Chakrathirtha committee, however, went beyond its brief and made major changes to the syllabus by including and deleting certain chapters. While a chapter on RSS founder K B Hedgewar was added, lessons on social reformer Narayana Guru and freedom fighter Bhagat Singh, as well as works by progressive writers, were dropped. Recently, a group of academics and writers submitted a memorandum to Chief Minister Siddaramaiah demanding the withdrawal of what they described as anti-Constitutional and communal textbooks which distorted history. While assuring the delegation of action, Siddaramaiah said the act of polluting children's minds through textbooks and lessons cannot be accepted.

While distortions should no doubt be corrected, it is unfortunate that students have become pawns in the hands of politicians who seek to further their own agenda through textbooks. It is high time we accepted history in its entirety. The purpose of any revision should be to upgrade the skills of the students. Well-known writer Devanura Mahadeva has suggested the setting up of an autonomous body comprising subject experts to frame the curriculum. He believes this can prevent recurring controversies whenever there is a change in government. But given how politicians have managed to compromise the functioning of autonomous and independent bodies, it is doubtful if Mahadeva's suggestion will serve any purpose. Considering that the academic year has already begun, any substantial revision of textbooks should be put off until the next session so that students are not put to any hardship. But above all, students should be insulated from the politics of the day, with independent experts and not politicians deciding what they should or should not study.

**Students should be insulated from party propaganda**

## SELECTIVELY SCIENTIFIC

# Lessons from Darwin?

## No, thank you

A naturalistic worldview of science is a threat to an ideologically-driven polity; Darwinism and majoritarianism can't go hand in hand

NAVNEET SHARMA

**D**arwin would have never thought that natural selection would come to such a pass that those who get 'elected' will doubt the very idea of their own natural selection by nature to serve the larger humanity by being members of the legislature. It would have helped their own argument via social Darwinism that they are innately better incarnates to rule over the country or the world.

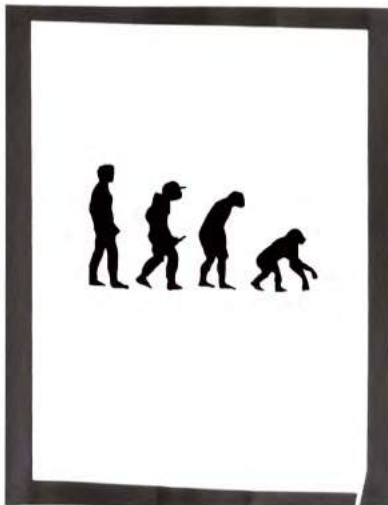
The recent brutalisation of the NCERT textbooks suggests otherwise, yet when a learner asks how and why we are on earth, the answer will come from creationism rather than Darwinism. Darwin, in a contest with God, was sure to lose due to his own idea of the survival of the fittest. Probably he never realised that between science and pseudo-science, it would be the latter that would be fitter to survive.

The certitude of science in Darwinian theory is very high; it has undergone extensive testing through experiments and observations. Charles Darwin and Alfred Russell Wallace's theory of evolution through natural selection became recognised in 1859 when Darwin published *The Origin of Species*. Even then, people who had more power and more belief in the divine book than science feared the social and moral implications of this theory. The problems of teaching natural selection to the newer generation are many for those who have more faith in the status quo than change. Natural selection is a simple theory that asserts how populations change through variation, inheritance, selection, time, and adaptation.

### Variation and Inheritance

The members of any given species are hardly the same. Those who oppose this theory somehow believe that yellows, whites, blacks, Aryans, Dravidians, Americans, English, Pakistanis, Muslims, Hindus, Christians, Brahmins,

Dalits, gays, and straights are very different species and only their own ilk will survive, to which the proponent belongs. There is a fierce contest among the people who oppose natural selection to prove that they are the 'fittest' to reproduce and survive given any opportunity to compete. Similarly, in the matter of inheritance, those who oppose Darwin believe that they inherited the best ancient wisdom from their ancestors and hence are the truest advocates of endogamy and purity of bloodlines. When women are exhorted to produce more children to strengthen the number of their religion or caste, probably it is the Darwinian elaboration that lurks in the background.



Iqbal wrote, *Kuch dam hai ki hasti mitati nahin hamari, sadiyon raha hai dushman daur-e-jahan hamara* (probably there is something inherently resilient in us that is why we are here; otherwise, the world has been against us). The intent of what Iqbal wrote also has Darwinian echoes, as it points out how the glorious us survived despite several invaders from the Northwest and the onslaught of European colonialism. This may also render us incapable of explaining why the OBC, SC, and ST populations together are higher than Brahmins and Kshatriyas when they are suggestively fitter to reproduce and survive. This explains the sinister and conspiratorial design behind the population explosion of certain religious and caste communities.

### Time and Adaptation

This is one of the most problematic idea in times when we have restarted cel-

ebrating the drive, namely 'Go back to the Vedas' and also in times of 'righting' all historical wrongs. We are humans who should not adapt to the changing times; we should rather make efforts to go back in time to reclaim the power that we once had. The discourse of modernity, modern, and mass education similarly vouched for liberty and equality and also that all of us have common ancestry and hence belong to the same origin. It is probably the belief in a different creator that implies my creator is stronger and superior than yours, which impedes believing in Darwin.

Darwin's theory revolutionised not only the discipline of biology but almost every other discipline, be it economics, political science, or educational theory itself. The idea of competition, struggle for existence, and survival of the fittest, though not original to Darwin's work yet attributed to him, has affected every discipline, curriculum, and pedagogy. Removing Darwin and every reference to his theorization may shackle the very foundation of many other disciplines.

Also, people with scientific tempers would think in multi-dimensional ways, developing their curiosity to explore more of nature, as Darwin did. Such a naturalistic worldview of science can be the biggest threat to an ideologically-driven polity; progressive science, aka Darwinism, and regressive ideology, aka majoritarianism, won't go hand in hand. Any State that makes efforts to be hegemonic cannot tolerate people asking questions. Three noted Darwinian followers (or activists) with scientific tempers, namely Gauri Lankesh, Narendra Dabholkar, and Kalburgi, were eliminated. The elimination of Darwin from the textbooks will then turn out to be the last straw in this polity.

There is no western science, Indian science, African science, or Native American science; science is just science as it endeavours to exceed authority over the presumptions of any one culture and thus remains open to criticism and refutation. Rejecting science in favour of a cultural subversion of science is extremely harmful, especially for those who take pride in providing Covid vaccines to the whole world rather than deifying Corona mata akin to situla mata.

(The writer teaches in the Dept. of Education, Central University of Himachal Pradesh, Dharamsala.)

# Jobs for the young must be a key policy priority

**E**conomic data published this week turned my attention to economics, economies, and the numbers or statistics that make up the raw material that economists study. I was prompted to do so by the latest figures in the Periodic Labour Force Survey (PLFS).

One definition of the economic analysis that we are presented with every day is that "it involves the choices that individuals, businesses, governments and nations make to allocate resources". But figures are narrow and lifeless, and analysing them through the lens of economics can never, on its own, produce a full picture. To make matters worse, the analysis can produce a wrong picture if it becomes a theory, such as socialism or market economics. India once experienced an overdose of socialism. It is now, as I see it, suffering from an overdose of market capitalism. Socialism bound the economy in red tape. Now with the dominance of market capitalism, India appears to be going down too narrow a path.

I have a friend, Ram Gopal Aggarwal, who has had a distinguished career as an economist. He studied mathematical economics at Manchester University and went on to use that most numbers-obsessed school of economics to build models for India and other countries. But he found that mathematical calculations very often produced wrong results, so preferring to be, as he put it, roughly right rather than absolutely wrong, he joined the World Bank. There, he held senior positions in Africa, followed by China. In Africa, he saw the harm that The Washington Consensus – a raft of policy prescriptions that institutions such as the World Bank or International Monetary Fund often operationalise in developing countries – can do. In China, he saw the costs as well as advantages of following the Chinese model of development. Now, he has become sceptical about economics.

Recently, I discussed with Ram one of the most commonly repeated economic

theories about India being a lucky country because of its youthful population. China and America are going to have an ageing population. China now appreciates that its economists were short-sighted when they urged the government to take strict measures for controlling the expanding population. As a result, the government did away with its one-child policy recently. Two years ago, families were told to have as many children as they wanted.

Ram believes India's market economics could well turn into a disaster. The PLFS survey I talked about earlier was headlined, "Urban Youth Unemployment Falling, Not Enough For Demographic Dividend". It suggests production hasn't expanded in proportion to employ the youth bulge. The survey maintains the unemployment rate among India's urban youth (15 to 29) during the fourth quarter of the 2022-23 financial year remained elevated, though lower than previous quarters. This raised questions about India's youth dividend policies.

There is one question that should be asked – how will many jobs be created when the advice to boards is often to increase profits by cutting staff.? What about the much-talked-about AI or artificial intelligence? Surely it will be a job killer? Already in supermarkets, customers are encouraged to manage paying for purchases themselves with machines that have put cashiers out of work. There are forms you now have to fill in electronically because there is no longer any other way of doing it. Figures for the loss of these sorts of jobs could surely be signs of the problem Ram is warning about. What he recommends for India is a major expansion in the construction sector, particularly housing, and relations with the best universities that teach subjects such as medicine, engineering, accountancy, and other professions that students might want to follow.



Mark  
Tully

*The views expressed are personal.*

HT/4/12

# School closure row amid problem of plenty

Himachal's move to denotify over 500 schools has triggered a debate on politicisation of education

SUBHASH RATA

**T**HE Congress government has denotified more than 500 educational institutions in Himachal Pradesh since it came to power six months back. Over 400 of these, opened in the past eight to 10 years, had zero enrolment. The remaining 100-odd denotified institutions (the order to denotify many of these has been temporarily put on hold) are among the "320 institutions opened/upgraded by the previous BJP government in the past six months of its tenure." The Congress claims that most of these were opened with an eye on elections, without budgetary provisions and any real requirement. The denotification has triggered a slugfest between the government and the BJP.

While the BJP attributes the move to political vendetta, the government cites negligible enrolment in these schools, the shortage of staff in various schools with good enrolment and the precarious financial condition of the state to justify the move. "There's 50 to 80 per cent shortage of teaching staff in several schools, mainly in Chamba, Sirmaur and Kullu districts as well as upper Shimla. How are we going to offer quality education if we keep opening new schools, especially in places where there is no reasonable need?" questions Rohit Thakur, Education Minister. "The idea behind denotifying institutions with negligible enrolment and other decisions we are taking is to strengthen the existing institutions to ensure quality education," he says.

Incidentally, only those institutes are being denotified which do not meet the minimum enrolment criteria fixed by the government. "In view of the tough terrain of the state, we have even relaxed the criteria to ensure that most schools meet the condition," says Thakur. As per the criteria laid down by the government, a primary school must have 10 students, a middle school 15, a high school 20, a secondary school 25 and a college 65 to remain operational.

Many teachers too seem to be on the same page as the government regarding the minimum enrolment criteria and denotification of institutions with negligible enrolment. "Having schools with just five to six students makes little sense. Such low enrolment is a barrier to learning. There's more competition and better learning if there is competition (strength) in a classroom. Even the teachers could lose interest with such inadequate strength," says Ashwani Kumar, president of the All India Federation of Teachers' Organisations. "I don't think there is any scope left for expansion of schools in our state now. It's high time the government focused on consolidating, especially of the senior secondary schools,



AP/ANAND

## SHARP DROP IN LEARNING ABILITIES OF CHILDREN, MAINLY DUE TO THE OUTBREAK OF COVID-19

- As per the latest Annual Status of Education Report, the basic reading ability of children has reduced significantly in the state.
- The percentage of children in Class III who can read Class I level text has dropped from 47.7 per cent in 2018 to 23 per cent in govt.

- schools in rural areas. A drop from 74.5 per cent to 60.2 per cent has been recorded in the reading abilities of Class V children.
- There has been a sharp drop in basic arithmetic skills as well. The percentage of Class III children who can do subtraction

- has dropped from 42.4 to 31.3 per cent.
- Even as the decline has been recorded across the country, mainly due to the outbreak of Covid-19, the drop in learning abilities is sharp enough to ring alarm bells for all concerned.

A proper survey must be conducted to ascertain the requirement of a new school or upgradation," he says.

Some teachers, however, have issues with the implementation of the denotification process. "The government denotified 90 schools on May 26. A few days later, the denotification order for many of these schools was put on hold. This shows lack of clarity and communication between the Education Directorate and the government. It will cause uncertainty and anxiety among the students in these schools," says a school principal, requesting anonymity. "Also, how and where will the government accommodate the students of the schools that will eventually be denotified?" he asks.

### The opposition within

Applying the minimum enrolment criteria to schools in tribal areas would not be easy. The opposition to denotifying schools in the tribal areas has started emerging from within the Congress — party state president Pratibha Singh has advised the government to not denotify schools in the tribal areas in view of the difficult geographical and climatic conditions.

No school has been denotified in tribal areas. "The connectivity in tribal areas, though, is much better now compared to the time when schools had to be opened after every 1 or 2 km to ensure education to all children," says the minister. While

agreeing that every child should get elementary education close to home, several teachers feel the government could look to offer a dedicated transport facility to the students where the enrolment is very low. "Running a dedicated bus or cab for these children would cost much less than running a school in close proximity. And studying in a classroom with a greater number of children will enhance their learning experience," says a principal, on condition of anonymity.

Meanwhile, the Education Minister feels the shortage of staff and providing quality education to the students are much bigger issues facing the government and the department than denotification of some schools. "There's an overall shortage of 12,000 teachers. As many as 3,145 schools are running with a single teacher, and there are no teachers in 455 schools," reveals the Education Minister. "This shortage has started to reflect in our performance. The state has slipped from top three to the 11th spot in the Performance Grading Index," says Thakur.

It's vendetta politics and nothing else, counters BJP spokesperson Naran da. "Most of the educational institutions that have been denotified are in Mandi district, where the Congress fared badly in the Assembly elections. Also, there is no clear criteria and cut-off date to

check enrolment. Their own leaders like Pratibha Singh and Asha Kumari have started speaking against the closure of these institutions," he says.

### Rationalisation efforts

Much of the staff shortage in several institutions is also because of uneven distribution of teachers. Several institutions, mostly in urban areas, are over-staffed as teachers do not want to go to rural or tribal areas. "Rationalisation of staff is the need of the hour to impart quality education to all students. We found a school where there were two students and five teachers. And there are several other schools with such a skewed teacher-pupil ratio," says Thakur.

The minister claims the government has started taking steps for the rational distribution of teachers. "We have already cancelled the deputation of 400 teachers. They were posted somewhere else, but were working elsewhere on deputation," he says. "Besides, we have taken approval from the Cabinet for the appointment of more than 2,000 teachers in various categories to address the overall shortfall. Filling all these posts will take some time as recruitment is quite a cumbersome and time-consuming process," says the minister. Besides, he says, mass litigation in the Education Department is a big stumbling block. "The litigation rate is very high. The cases related to

### SHORTAGE OF TEACHERS

There's an overall shortage of 12,000 teachers. As many as 3,145 schools are running with a single teacher, and there are no teachers in 455 schools. This shortage has started to reflect in our performance. The state has slipped from top three to 11th spot in the Performance Grading Index.

Rohit Thakur,  
EDUCATION MINISTER

### NUMBER OF GOVT SCHOOLS

15,380

### NUMBER OF TEACHERS

67,254

### ENROLMENT IN GOVT SCHOOLS

8,75,843

six to seven categories of teachers and officials are in the courts."

The other huge challenge that affects students the most is the lack of a transparent transfer policy. Right through the year, teachers keep getting transferred for one reason or the other. Suresh Bhanawat, Education Minister in the previous BJP government, tried to bring in a transfer policy but the idea was shelved at the last moment. "We will try to build a consensus on bringing a clear and transparent transfer policy in the Congress Legislature Party and the Cabinet. Personally speaking, I am all for it," says Thakur.

Most teachers, too, feel the need for a transparent transfer policy. "Many teachers are reluctant to join tribal or rural areas because of lack of a clear transfer policy. A person transferred to the tribal area is not sure when he would be transferred back, so he does all he can to stop the transfer. If he knows for sure that he would be transferred back automatically after spending a fixed time in the tribal area, there won't be such reluctance," says Ashwani Kumar.

Interestingly, many teachers feel much of the resistance for a transparent transfer policy comes from the bureaucrats and politicians themselves. "It's unfair to paint teachers as those who are always looking to get a stop or transfer. The role and interests of bureaucrats and politicians far should be looked into," says a principal.

# Ode to students for whom marks aren't everything



IMMORTAL FOR A MOMENT  
NATASHA BADHWAR

As a teacher one witnesses breakdown of students and meets others whose life doesn't seem to depend on grades to feel worthwhile

AS the university semester came to an end last month, a significant number of my students were graduating this year. The final grades meant the world to most of them. A few students who had rarely reached out to me during the courses, sought meetings and began to send messages to discuss their progress and grades. Others wrote back after the grades were published with pleading, desperate messages to reconsider their score since their future prospects depended on getting the highest possible marks. Or so they had been led to believe.

I understand the anxiety and stress of students. They are yet another new generation in a world that measures their worth in terms of their marksheets, their first salary and the status of the university where they go for higher studies. Their parents have paid exorbitant fees to get them the best opportunities available and they never fail to remind their progeny of what is expected of them.

"What we call civilisation demands the

denial of human needs," writes Dr Gabor Mate, author of *'The Myth of Normal'*. "Our schools are full of kids with learning difficulties, mental health issues that are trauma-based, but teachers never get a single lecture on trauma. We are not a trauma-informed society."

As a teacher, even as one witnesses the slow motion breakdown of students, specially the most gifted ones, one meets others who display extraordinary resilience while coping with the system. They not only survive, they thrive. And their life doesn't seem to depend on grades to feel worthwhile to them.

Today, I write a tribute to the students who knew they were not going to get the best marks and they were absolutely fine with that. I promised this to one of my students whose final submission went missing from the folder where he had uploaded it, and when he was informed about it he was calmer than the person who had frantically searched him down to ask him to help us retrieve his lost submission.

After 24 hours of trying to coordinate despite failing Internet connections and unstable online storage, my student sent me a voice message. He told me how hard he had tried to salvage the situation and how sorry he was about whatever seemed to have gone wrong.

Then he said, "I know you have to submit grades and all, but I'm helpless. I know you can't wait and all any more. I have to graduate and you have to turn in the grades... Either way, it's fine. I didn't mean to mess this up, but I guess that's how it is."

I did not expect to feel as relieved as I did when I heard this message. I wrote a note in my journal: "I've been so busy and over-worked trying to extend care to everyone besotted, obsessed and dependant on getting the top grades. I must not forget to appreciate those who have coping skills and perspective to imagine a perfectly wonderful life beyond all this."

I sent one last text to my student: "Thanks. I promise to write an ode to stu-

dents who don't disintegrate when they get less than an A."

In the middle of writing this column, I took a break and attended a scheduled online session of guided meditation conducted by a friend. For half an hour, I lay down in a quiet corner, trying to keep my attention on my breath and my body. I'm not always successful at keeping my attention steady; but I always emerge relaxed. My brain feels like it has been cleaned gently and I don't feel the weight of a clutter of thoughts for a long time. I often find that the calmness acts like a filter. Clarity emerges from the silence.

Take breaks, I say to my students. Quiet breaks. There is no need to always set oneself up to be acknowledged, appreciated, judged. We have the right to disengage. We can return to the self. We have far more autonomy than we give ourselves the permission to believe. Playing the victim can become a default response in a world where we feel the cards are stacked against

us. It even yields results in the short run. In the long run, it starts our own potential.

Discussing their final performance with another student over email, I wrote: "The point of all learning is to get closer to touch with how one is wired, what inspired us, what is easy for us, what needs practice but remains compelling to us etc. Grades will fade in relevance soon, but the experience will stay and I love that you are engaging with the course and so learning from this perspective."

As I look back at my interactions with trainees and students through the decades, I realise that offering a sense of autonomy is one of the most important gifts a teacher can offer. Offering them choice, not shaming for creating anything less than perfect. Honouring the process of learning and experimenting with form and style rather than judging only the final submission or exam performance.

— The writer is a filmmaker, author and teacher.

A tyranny called board examination results

# Collective obsession

SUKANTA CHAUDHURI

**A**re all Indians as obsessed with board exams as we are in Bengal? Through April and May, various boards publish their results. Each announcement is followed by a rash of media reports, with the kind of hyperanalysis commonly applied to cricket scores. Did girls fare better than boys? Or the districts than the city? Were the top marks fractionally less than last year, or the top scorers marginally more in number? Did certain hallowed schools blot their record, and if so why?

There are visuals of young people, patently ill at ease, being fed sweets by their mothers — how many times for how many cameras, one wonders. There are hair-raising accounts of how many hours a day the top scorers swotted. (We hear discreetly little of how many tutors the parents engaged.) Some of these youths reappear on TV commercials to declare how they owe their results to certain helpbooks. I hope they sting the publishers for sums in six figures. Nothing less would compensate for the way they are being compromised.

I would not seem ungracious. As a lifelong teacher, I feel nothing but affection for these youngsters, wish them nothing but the best. But I also feel a deep concern — for those who make it to the media and those who don't.

Each outbreak of results casts countless families in deep gloom. Their children have not failed the exam: they have scored brilliantly, but fractionally less than fifty or a hundred others of the lakhs that sat the exam. In the bizarre phrase that mystifies Martians, they have not managed to 'stand'. They are filled not with confidence but with shame. I have seen a boy cross-examined on TV for ranking third in the 10+ exam but 'only' eleventh in the 12+.

In moments of outrage, I feel it should be a crime to announce someone's exam results in the media: it is a grotesque violation of privacy. That an irresponsible society calls for it is no excuse.

Over 8.5 lakh students sat for the West Bengal Uchcha Madhyamik this year. Common sense suggests that some 1%, or 8,500, must be in the highest bracket of exam-passing merit. Which twenty or fifty or hundred of them find themselves at the favoured end of this horizontal ladder is the merest luck of the



draw. *Moreover, that hypothetical 8,500 will not occupy the top 8,500 positions.* Some may land in the second division or, however rarely, even fail.

To obviate the tyranny of exam marks, enlightened societies use grades instead. In India, the argument against grades is that board marks guide college admissions. This was never entirely true: where demand is greatest, as for medicine, engineering or the most sought-after 'general' courses, special entrance tests were and are the norm. Now that board exam marks scale the heights, imposing cut-offs of 100%, centralized admission tests are being introduced for all college courses, most notably the Common University Entrance Test. Every elite private university, today the first choice for an exclusive education, has its own entrance procedure.

In other words, if the pressure of board exams is easing at all (which is by no means certain), that is more than outweighed by the battery of other hurdles to any kind of meaningful training and career. Most student suicides are among aspirants to professional courses, while preparing for the ordeal or in the burn-out after admission. In its brief history to date, the medical NEET has already proved a greater

torment than the engineering JEE. Coaching institutes clearly feel that to give value for money, their regime might drive some trainees to despair. Appallingly, many parents think they owe it to their offspring to consign them to this hell.

The solution does not lie in psychiatric counselling, though victims of the system might badly need it. It does not lie in tinkering with the curricular structure — for instance, by allowing students to opt out at any point of the course with some kind of certification, as the National Education Policy enjoins. Unlike many colleagues, I actually consider that a good idea; but such mid-point departures will always carry the stamp of failure. As long as there are more rungs to the ladder, students will undergo untold stress to climb them, and a different kind of stress if they cannot.

Most emphatically, the solution does not lie in multiplying private universities open to a minute fraction of our youth. Affluent middle-class families with two or three children incur huge debts to send them there. For the less affluent (further disadvantaged by the decline of the government school system), entry to the few prized public institutions becomes more stressful than ever. The institutions themselves come under mounting pres-

sure to perform beyond capacity.

The only solution is for the government, Central and state, to invest in education as they invest in roads and energy and airports, to say nothing of the Central Vista, bullet trains and the world's tallest statue. We need to exponentially expand and upgrade our public university system, which, in turn, calls for quantum improvement of government schools (I don't mean high-end Kendriya Vidyalayas). The insane pressure of exams, whether boards or admissions, will ease only when there are enough public institutions commanding people's trust and convincingly preparing our youth for a fulfilling life at affordable cost. The deficit in public trust is huge and partly undeserved: against all odds, our best public institutions still perform creditably, even if we exclude the pampered IITs and IIMs. But there too, fees are mounting beyond the unstressed reach of more and more people.

I know of a little boy who fared badly in that affront to childhood, the Class I admission test. Back with his waiting father, he said, "Baba, ami heray gecchi" ("Baba, I've lost"). As our children grow up, we afford them endless opportunities to stare defeat in the face in the exam hall. But the real losers are ourselves and the land we live in.

# Muslims do not detest modern education

It is a misconception that a predominant section of the Muslim community prefers madrasas over mainstream modern education.

## OPINION

FURQAN QAMAR



Third, the argument that the decline in the enrolment of Muslims in higher education was due to bottlenecks in the feeder channel and that not enough Muslims go to and complete senior secondary level of education to become eligible to seek admission to higher education.

Coming to the first issue first, the official data, as reported by the All India Survey of Higher Education (AISHE) as brought out annually by the Ministry of Education, Government of India, shows that nothing could be further removed from the truth. The participation of women in higher education compared to their male counterparts has persistently been rising.

Muslim women constituted 46% of the Muslim enrolment in higher education in 2012-13. Since then, their share has gone up to 50.32% in 2020-21. Participation of Muslim women in higher education is quite close to the national average for all sections of society. Clearly, the decline in the enrolment of Muslims in higher education is in no way on account of the withdrawal of women from modern higher education. In fact, in 2020-21,

the enrolment of Muslim men declined more sharply than the number of Muslim women.

The UDISE+ data on school education shows that Muslims constitute 13.69% of the total enrolment in primary to senior secondary schools taken together. Indeed, their share is about 10.46% at the senior secondary level due to a wide variety of reasons. Prominent amongst them would be the economic reasons. Notably, at the senior secondary level as well, Muslim women account for about 53.60% of the total enrolment of Muslims.

Obviously, Muslims neither abhor nor avoid sending their girl children to mainstream modern educational institutions. They, like everybody else in the country, however, require a safe and secure environment for their children and expect them to be treated humanely and as equal citizens of our great country.

As regards madrasas, it is a misconception that a predominant section of the Muslim community prefers them over the mainstream modern education. The Sachar Committee had dwelt on the issue in detail way back in 2006 and had highlighted that only 4% of the enrolled and a little over 3% of all Muslim children were studying in madrasas.

It had further explained that the misconception is caused because people often fail to distinguish between madrasas and maktabas. Maktabas are small-sized in-

*During the past 17 years, the number of madrasa-going children has come down significantly. The misconception, and consequent misgivings, about madrasas continue to persist. Muslims neither abhor nor avoid sending their girl children to mainstream modern educational institutions.*

stitutions offering religious education to Muslim children on a part-time basis.

Most of the Maktab-going children are enrolled in mainstream schools. During the past 17 years, the number of madrasa-going children has come down significantly. The misconception, and consequent misapprehension and misgivings about madrasas, however, continue to persist. Take, for example, the most populous state, Uttar Pradesh (UP). India Today reported in 2022 that the number of students attending madrasas in UP had declined from 4.23 lakh in 2016 to only 0.92 lakh in 2022. Importantly, most madrasas students appear in board examinations as well.

According to a New Indian Express story published in 2021, there were 3.71 lakh students enrolled in madrasas in 2017 in UP, of which 3.0 lakh appeared in the board examination. Critically, it mentioned that the number of such students crashed to only 1.62 lakh students in 2021, of which 1.20 lakh appeared in the board examination.

Going by the latest available national-level data, the

National Commission for Protection of Child Rights (NCPCR) reports that the country has a total of 25 crore children aged 6-14 years. Of these, 8.4 crore (or 33.6%) are "out of school".

It also reports that the number of Muslim children in the same age group at the same time was 3.8 crore out of which 1.1 crore (or 28.9%) were "out of school". NCPCR further informs that only 15 lakh students were enrolled in recognised madrasas. It, however, erroneously assumes that the remaining 95 lakh Muslim children study in unrecognised madrasas.

The bottleneck in the feeder channel appears quite plausible. The UDISE+ data for 2019-20 reveals that Muslims constituted 9.89% of the total enrolment in the higher secondary level. Given that the total enrolment at the higher secondary level was 2.59 crore, the number of Muslim enrolment at that level of education works out to be 25.62 lakh.

In the absence of precise information about Muslims on the dropouts, transition, success, and progression rates from class 11 to 12 and beyond, one can proceed

further on the basis of certain assumptions derived from the anecdotal evidence and some generalisations. It is generally known that the dropout rates amongst Muslims are higher than the national average. Thus their transition rates to higher classes are lower. So is the case with their success and progression rates which are significantly lower than the national average.

Taking these into account, it may be assumed that no more than 40% (or 10.25 lakh) of the Muslims in senior secondary schools would be in class 12. Assuming that no more than 80% (about 10% lower than the national average) of them would be appearing in the board examination and that their success rate would be no more than 65% (12% lower than the national average), nearly 5.33 lakh Muslims must have completed the senior secondary examination in 2019-20.

Assuming that only 60% (13% lower than the national average) of them would be seeking admission to higher education programmes, the number of such candidates would be around 3.2 lakh. This would indeed be regarded as very low in comparison to the size of the Muslim population in the country and would indeed be a major barrier to accessing higher education.

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The article "Why are Muslims Missing from Higher Education" (The Daily Guardian, 25 May 2023) elicited many valuable questions, comments and insight from the readers. Three of them deserve careful consideration and critical appraisal. First, the suggestion that the 8.53% decline in the enrolment of Muslims in higher education or a reduction in their enrolment by 1.79 lakh in 2020-21 over 2019-20 is due to the aversion of Muslims to send girl children to modern higher educational institutions.

Second, the belief that the lower participation of Muslims in mainstream education is on account of their preference for madrasas over modern education, which, as a consequence, has led to the decline in their enrolment in higher education.

# China overtakes the U.S. in scientific research output

While there has been dispute over the best metrics with which to judge the quality of research output, China seems to be rising to the top in all of them

## DATA POINT

Vasudevan Mukunth

For a long time, the U.S. led the world in the number of scientific research papers published and the number of citations that these papers racked up. While the volume of papers published by the researchers of a country alone doesn't imply a higher chance of winning a Nobel Prize, it still suggests the presence of a productive research establishment. This said, scholars have also devised ways to measure research output that also says something about its quality. On these measures too, the U.S. has been leading all other countries. But this dominance seems to be slipping.

For more than half a decade now, Chinese researchers, or researchers whose primary affiliation is a China-based institution, have been publishing more papers than those in the U.S. **Chart 1** shows the papers published in science and engineering conferences and peer-reviewed journals indexed in the *Scopus* database. India is currently third on this list.

Last month, China was found to have overtaken the U.S. on a metric designed to capture quality as well: the number of researchers or institutions whose papers received the most citations for papers in the 82 natural science journals tracked by *Nature Index* (**Chart 2**). India stood fifth on this list.

China upped its focus on science and technology and investments in it in 1976, as part of the 'Four Modernizations' programme. By 2015, it was spending 2.07% of its GDP on R&D. In 2018, it had more than 4 million scientific researchers within its borders – the world's highest – making the quantity of papers unsurprising.

**Chart 3** shows the countries with the most 'Highly Cited Researchers', i.e., those whose papers received the most citations, after filtering and analysis by

Clarivate Analytics, based on papers in the Web of Science database (including social sciences). It suggests that the quality question that dogged China's research output for a time may be fading now. India isn't in the top 10.

In 2018, the Chinese government announced a policy to crack down on scientific misconduct that, according to *Nature*, would penalise offending scientists with "loss of grants and awards" and restrict opportunities "outside academia". In 2020, it also reversed its policy to pay bonuses to researchers for publishing papers.

A notable feature of China's rise is the 'Thousand Talents' programme it launched in 2010. It incentivised accomplished research scholars to move to China, where they could receive large one-time bonuses, special research funds, priorities on grants, privileges on their visas (if they weren't Chinese), and help with housing.

A study published in January found that the 'Young' version of the scheme had brought many young scientists back to China but not people who had become leaders of their fields. One of the study's authors told *South China Morning Post* that this was due to bureaucratic intervention, nepotism, and China not being "at the global knowledge frontier yet".

The plan has also drawn suspicion. In 2018, the U.S. Justice Department began to probe researchers with ties to China. It found that Charles Lieber, a chemistry professor at Harvard University, had received money as part of the 'Thousand Talents' programme but hadn't disclosed it to the U.S. Internal Revenue Service. He was convicted in 2021 and sentenced in April 2023.

Technological innovation has been at the heart of the development of modern China, so much so that its chief political ideology has been called 'techno-nationalism' (**Chart 4**). While China is well in the lead on patents filed, India is fourth.

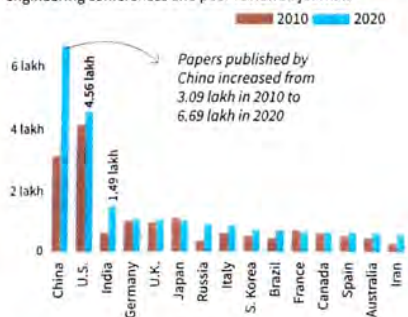
## Research report

The data for the charts has been collated from the U.S. National Science Board, *Nature Index*, Clarivate Analytics and the World Intellectual Property Organization

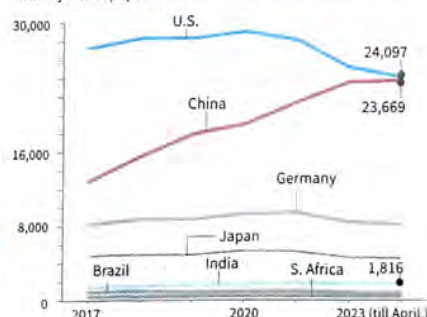


Tsinghua University in Beijing, China, is among the world's leading academic institutions for scientific research and is ranked no. 1 in China.

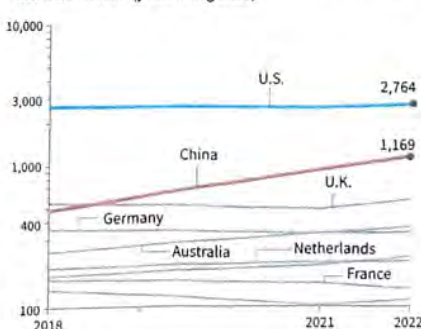
**Chart 1:** The chart shows the papers published in science and engineering conferences and peer-reviewed journals



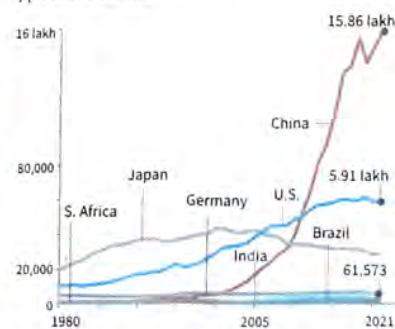
**Chart 2:** The chart shows the number of authors on *Nature Index* journal papers



**Chart 3:** The chart shows the countries with the most 'Highly Cited Researchers' (y-axis in log scale)



**Chart 4:** The chart shows the number of patent applications received



# Career opportunities galore in data analytics

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Data science in India presents thriving career prospects for skilled individuals as organizations across sectors increasingly rely on data-driven insights, leading to soaring demand for data scientists. It would be fair to say that this is the best time for graduates to focus on learning new skills that are in demand by employers like data science. Data science jobs rose by 30%, with median salary rising by 25% in India according to certain reports. In this competitive domain, aspiring data scientists must develop unique skills that set them apart from their peers in order to achieve success. Today we will explore the top 10 skills required to succeed in the field of data science in India.

## Programming Skills

Proficiency in programming languages is crucial for data scientists. Python and R are widely used in the industry due to their extensive libraries and flexibility. To develop the skill, one can enroll in online courses or certifications specifically tailored for data science programming. Practice coding by working on real-world projects and participating in open-source communities. Data scientist, data analyst and machine learning engineer are among the few job roles one can pursue with this skillset. The key responsibilities could include developing and implementing algorithms, data cleaning, and preprocessing, creating predictive models, analyzing and

interpreting data.

## Statistical Analysis

A strong foundation in statistics and mathematics is fundamental for understanding data patterns, drawing meaningful insights, and making accurate predictions. Proficiency in statistical techniques, probability, linear algebra, and calculus is essential. One can take online courses or pursue a degree in statistics, mathematics, or related fields. Solve mathematical problems, practice statistical analysis on datasets, and explore machine learning algorithms. The key responsibilities for those working with these skills could include analyzing data using statistical techniques, creating mathematical models, developing forecasting methods, and conducting hypothesis testing.

## Machine Learning

Machine learning lies at the core of data science. Understanding and applying machine learning algorithms is crucial for building predictive models and extracting valuable insights from data. Familiarity with algorithms such as linear regression, logistic regression, decision trees, random forests, and neural networks is vital.

To learn, one can enroll in online machine learning courses and complete hands-on projects. Work on Kaggle competitions to gain practical experience and experiment with different algorithms. As a machine learning engineer, one may be responsible for developing and training machine learning models, fea-

ture engineering, model evaluation and optimization, and implementing algorithms for prediction and classification.

## Data Visualization

The ability to present data in a visually appealing and meaningful manner is essential for effective communication of insights. Mastery of data visualization tools such as Tableau, Power BI, or Python libraries like Matplotlib and Seaborn holds significant value in the field. Explore online tutorials and courses on data visualization tools. Practice creating visualizations with real-world datasets and learn design principles for effective data communication. As a part of one's job, one may have to create visually appealing dashboards, generate interactive charts and graphs, and convey complex data insights through compelling visual representations.

## Big Data Technologies

With the exponential growth of data, familiarity with big data technologies is crucial. Knowledge of tools like Hadoop, Spark, and Hive enables data scientists to process and analyze large datasets efficiently. Understanding distributed computing and data parallelism is essential. You can take online courses or certifications focused on big data technologies. Set up a local cluster or use cloud platforms to practice working with big data frameworks. As a big data engineer, one may be required to work on processing and analyzing large-scale datasets, implementing distributed computing

techniques, optimizing data storage and retrieval.

## SQL Database Skills

Proficiency in SQL (Structured Query Language) is important for managing and querying databases. Understanding database concepts, writing complex queries, and manipulating data using SQL are essential skills for data scientists. To develop the skill, one can take online courses or tutorials on SQL, practice writing SQL queries on different database platforms, and work on database projects. Job responsibilities could include extracting data from databases, querying and manipulating data.

## Domain Knowledge

Having domain knowledge in specific industries, such as healthcare, finance, e-commerce, or manufacturing, provides a competitive advantage. Understanding the business context helps data scientists derive actionable insights and tailor solutions accordingly.

One can gain domain knowledge through internships, industry-specific courses, or working on projects related to a particular sector. As a domain specialist, one may be required to apply data science techniques to solve industry-specific problems, understanding business objectives, providing data-driven recommendations.

## Communication

Data scientists need strong communication skills to convey complex concepts and insights to both technical and non-technical

stakeholders. Collaborating with cross-functional teams is essential for effective problem-solving and project implementation.

Practice presenting data insights in a clear and concise manner. Engage in group projects, participate in data science communities, and enhance interpersonal skills. Key Responsibilities in this area would include communicating findings to stakeholders, collaborating with teams, explaining technical concepts to non-technical audience.

## Continuous Learning

Data science is a rapidly evolving field, and staying updated with the latest tools, techniques, and algorithms is crucial for success. Having a growth mindset, adaptability, and the willingness to learn new concepts are essential traits for aspiring data scientists.

Follow industry blogs, attend webinars and conferences, join online communities, and participate in data science competitions to stay updated. At work, one may be tasked with keeping up with industry trends, continuous learning, adopting new technologies, experimenting with innovative approaches.

To thrive in the field of data science in India, aspiring data scientists should focus on developing a well-rounded skill set. By dedicating time and energy to mastering these proficiencies, individuals can pave their path to success in the ever-evolving realm of data science.

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HT Hero Vired

# How upskilling courses help students stay ahead of the curve

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Educators and students alike are facing a significant challenge. In this era of digital transformation, the traditional methods of educating through face-to-face classroom learning are struggling to keep up with the needs of employers. And students are aware of this shift.

The October 2022 report from the National Student Clearinghouse Research Center (NSCRC) shows that college enrolments have been down year-on-year for the last three years. However, according to the data analyst, Arizton, the global e-learning market is projected to grow at a CAGR of 14.22% to reach \$ 475 billion by 2027. Something is clearly going on. In 2021, Harvard Business Review reported that, in the previous five years, nearly one in five (19%) American college students felt their education experience did not provide them with the skills needed to perform their first post-degree job. With the AI revolution getting into full swing, graduates and students are therefore justifiably asking themselves, "How can I hit the ground running?" "How do I get the applied skills and experience employers actually want?"

Don't forget, we're talking about technically savvy students here. The digital natives of our world, who intuitively know how to work an app without training. They've got the confi-

dence and enthusiasm to keep up with the fast pace of change. Their challenge now, though, is that a give-it-a-go attitude isn't enough as they need employable skills. This is where online upskilling courses come to the fore. The students of today are very comfortable learning online via videos, sound bites, and well-defined learning paths. Online courses facilitate quick and easy access to such modular learning. And though, yes, learners still need nudging, upskilling courses that provide the mentoring support required are achieving results much faster than traditional training. Which is exactly what students need to stay ahead of the curve.

This is a two-way thing, of course. Robert Half's 2023 salary guide reports that 88% of tech employers still say it's challenging to find skilled technology applicants. However, according to LinkedIn, "89% of L&D pros agree that proactively building employee skills for today and tomorrow will help navigate the evolving future of work." So, employers are cottoning on, and student applicants who already have online

courses displayed on their resumes will be ahead of the crowd evidencing their tech skills and enthusiasm.

But that's not all that students gain by taking this proactive approach to learning. A Bankrate report quoting Gallup found that "U.S. workers gained an additional 8.6% in annual income, or an average of \$8,000, after participating in upskilling programs, as of June 2021. Those who pay for their own skill development are at an advantage: 15.3% of workers who paid for their own skill development received a salary increase, while 5.2% of workers whose skill development was paid by their employer received a salary increase."

This all adds up to a very promising future for learners who take responsibility for their own skills development. Today's students have an amazing capacity for digital content, and this, coupled with the clear need for upskilling in hot fields such as artificial intelligence, data science, and machine learning, suggests online courses present the ideal solution. This means that learning platforms that don't just shell out certificates, but instead ensure students are armed with the employable skills and practical experience to get a job quickly, will make the difference. And no one will have to wait for a new academic year to start to enrol.

**ONLINE COURSES  
FACILITATE QUICK  
AND EASY ACCESS  
TO SUCH MODULAR  
LEARNING VIA  
SHORT VIDEOS AND  
SOUND BITES**

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# Overcoming challenges related to e-learning

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Despite offering a plethora of advantages, e-learning comes with its own set of challenges that need to be addressed to reap the true potential of digital education. Some of these have been discussed below.

## In-Person Motivation

One of the major challenges in e-learning is the absence of learner motivation, which can impede their engagement and participation.

However, this barrier can be overcome by adopting a unique instruction approach and designing a strategy that provides motivation.

Since appropriate messaging and persuasive communication are critical in online education, incorporating videos and audio in the course materials can draw the attention of learners and spark their interest.

## Transitioning challenges

Another hindrance linked with e-learning is a seamless transition from a conventional classroom-based setup to a remote learning environment. Since a majority of the students and educators are accustomed to physical classrooms, a rapid shift towards virtual learning becomes increasingly challenging.

## Limited interactions

Furthermore, online education often comes as one-way communication, with limited interactions between educators and students. This can significantly hamper the learning process and consistent motivation for students to actively converse and share their opinions.

A two-way communication approach can go a long way in addressing the communication barriers.

Also, in order to garner substantial learning outcomes with e-learning, it is crucial to avoid unwanted distractions and ensure effective time manage-

ment.

Laying emphasis on the benefits and time savings that E-learning delivers and allowing learners to comprehend at their own pace can improve their motivation and engagement.

## Technical glitches

Technical glitches are one of the most prevalent challenges in the digital learning space and can induce considerable disruptions for educators and learners. It is, therefore, critical to utilize a robust and user-friendly technology framework for furnishing and receiving training. E-learning can also be a problematic approach for those not well-versed in the language in which the courses are being offered. A reasonable solution for this could be to furnish course materials in different languages and focus on personalized learning.

## Assessments

Assessing the progress of

learners in e-learning can come as a formidable task, especially in cases where subjective evaluations like articles and presentations are involved. To overcome this, educators can leverage a host of unique assessment strategies to ensure that the progress of learners is effectively gauged. Utilizing quizzes and tests in this regard can allow educators to evaluate the understanding of students and offer prompt feedback to improve their performance.

E-learning is undoubtedly the future of education, and teachers must continue to accommodate and innovate to meet the growing requirements of students by employing suitable and smart strategies. With meticulous planning and a willingness to embrace emerging technologies and pedagogy techniques, we can contribute to a more promising and inclusive future for our coming generations.

The author is CEO & CO- Founder.

Toprankers

# CLAT vs other law school tests

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Law has emerged as one of the most sought career options after 12th standard with a plethora of opportunities available in various top law firms in the country. Emergence of world class national law universities has made a career in law all the more attractive where the brightest minds of the country study and explore the world of law with new lenses.

Law is no more only litigating in a court with black robes. A degree in law from a premier institute opens a lot of opportunities for a successful career. Those interested in making a good career in this field strive to be part of prestigious National Law Universities that provide them with great faculty, world-class infrastructure, accomplished alumni base, facilitates good internships and most importantly provides lucrative placements. However, to get into one of the top national National Universities a candidate has to compete with the cream interested in this field and write a very popular exam called Common Law Admission test (CLAT). Those writing CLAT also appear for other law entrance exams to make sure they end up in a good law university with the same preparation.

Earlier, newly formed NLUs used to have their own entrance examinations. However, a common platform has later been created that gives the option to get one of the 24 NLUs - CLAT. Around 60 thousand candidates appear for CLAT(UG) to get admissions into 5 five year integrated program in law from Various NLU Campuses. Better the rank of the candidates in the CLAT, better the chances of them landing into an NLU of their preference.

There are many other Law entrance examinations apart from CLAT. One is AILET, for admission into National Law University of Delhi which is one of the most prestigious and high

ranked NLU with the geographical advantage of NCR. With the Supreme Court, High Court and most top Law Firms situated in Delhi, it facilitates internships and placements and gives great exposure. Those writing CLAT and AILET also write other exams like SLAT which is for Symbiosis Law School, again a very reputed law. There is also an exam called MHCET which is for admissions into law colleges situated in Maharashtra which is also quite popular because some of the legendary colleges like GLC Bombay and ILS Pune, which have produced some of the greatest lawyers and judges in India, are part of MHCET. Then there are state level entrance examinations of various states like Kerala law entrance examinations and also some prestigious universities offering BA LLB courses like Benaras Hindu University.

Talking about the syllabus and pattern, it is more or less the same for all entrance examinations. Since a candidate is an aspiring lawyer his English language, Verbal ability and Vocabulary should be strong as he will be reading and analysing judgments and books. So, English language is a common component in all these entrance examinations. Other area that is tested is legal reasoning.

Although a 12th class student is not expected to know the intricacies of Law as they have not studied it in schools, aptitude towards law is tested to some extent in all the above mentioned entrance tests. CLAT expressly mentions that outside knowledge of law is not required but a passage will be provided and the candidate has to understand and interpret the passage to arrive at the right answer with the help of information supplied in the passage itself. A good reading habit of newspaper helps in both these sections i.e English and Legal Reasoning as by reading editorials from mainstream newspapers candidates get exposed to

good vocabulary and come

across legal news that helps them comprehend the same. Newspaper reading also helps in Current affairs and GK section tested in all the above-mentioned entrance tests. A candidate should be aware of the national and international events that happened at least till 7-8 months before the candidate appearing for the law entrance exams. Basic level Mathematics is also tested which is easily doable as 8th-10th level maths questions are asked and it has the least weightage in all the papers. Last year there were only 15 questions of Quant out of 150 in CLAT. Another most important component of paper is Logical reasoning that tests a candidate's critical and analytical reasoning ability and could be done through practice and common sense.

Talking about the difficulty level, since CLAT has the maximum number of candidates, the competition is always neck to neck where a single mark can take one's rank change a lot.. However, CLAT has 24 NLUs participating while AILET has only one NLU for which all candidates participate. So chances of getting NLU Delhi is less in AILET compared to getting any decent NLU through CLAT. Also, the difficulty level of AILET paper is usually higher than that of CLAT. For SLAT and MHCET the competition is also tough but relatively lesser number of candidates appear. For BHU a candidate has to write the CUET exam.

With more or less a common pattern and syllabus for all the law entrance examinations, a candidate can choose to try his luck in multiple examinations. Aim should be to get the best NLU but one should be prepared for a back up option and give the best in all the exams that one appears for to get a great five-year of campus life and a successful career in law ahead.

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# Embracing online learning

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Over the past few years, education has experienced a noteworthy shift, with the advent of online learning becoming a revolutionary factor.

With the continuous advancement of technology and the evolving educational landscape, conventional classrooms are progressively making room for a more adaptable and easily accessible learning environment. In this article, we delve into five compelling rationales that highlight the potential of online learning to redefine the future of education.

## Accessibility and flexibility

Online learning offers unparalleled accessibility and flexibility. Geographical barriers are broken down, allowing students from anywhere in the world to access quality education. Whether living in a remote area or juggling personal commitments, online learning enables individuals to pursue education at their own pace and convenience. Its flexibility empowers students to balance work, family, and other responsibilities while acquiring knowledge and skills.

## Personalized learning experience

Online learning provides a personalized approach to education, catering to diverse needs and learning styles. Unlike standardized teaching in traditional classrooms, online courses utilize adaptive learning technologies, data analytics, and artificial intelligence to customize the curriculum and teaching methods for each student. This tailored learning experience enhances student engagement, retention, and academic performance.

## Abundance of resources and interactive content

Online learning harnesses the vast resources available on the internet. Students gain access to an extensive range of educational materials, including e-books, articles, videos, and interactive content.

This wealth of resources allows learners to delve deeper into topics, conduct research, and develop a comprehensive understanding.

Furthermore, online learning often incorporates multimedia elements, such as simulations

and virtual reality, creating immersive and engaging learning experiences.

## Global collaboration and networking

Online learning fosters global collaboration and networking opportunities that transcend physical boundaries. Through virtual classrooms, discussion forums, and online collaboration tools, students can connect with peers and educators from around the world.

This multicultural and diverse learning environment promotes the exchange of ideas and perspectives, fostering intercultural understanding and preparing students for a globalized workforce.

Collaborative projects and group assignments conducted online enhance teamwork and communication skills, which are essential in today's interconnected world.

## Lifelong learning and development

Continuous learning and professional development are crucial in a rapidly evolving world. Online learning provides a seamless pathway for individuals to engage in lifelong learning.

Professionals can upskill or reskill themselves to stay relevant in their careers, while individuals can explore new subjects or pursue passion projects. Online courses, micro-credentials, and Massive Open Online Courses (MOOCs) offer accessible and affordable options for personal growth and professional advancement, empowering individuals to adapt to changing times.

As we embrace the digital age, online learning is poised to shape the future of education. Its accessibility, flexibility, personalized learning experience, abundance of resources, global collaboration, and lifelong learning opportunities make it a powerful force in transforming the educational landscape. While traditional classrooms will always have their place, integrating online learning offers a dynamic, inclusive, and transformative approach to education.

The time has come to embrace the potential of online learning and unlock a world of possibilities for learners of all ages.

The author is executive director and CEO, Thomson Digital and O&T

# Oxford, but not that Oxford: For-profit schools thrive in UK

EMMA BUBOLA

College recruiters walked immigrant neighbourhoods, knocking on doors or stopping people in shopping malls, selling the merits of a business-school education and adding a surprising offer: Get paid to enroll.

"Money, money, money," said Stefan Lespizanu, a former recruiter for Oxford Business College. "Everybody was saying, 'Hey, push the money.'"

News of the opportunity spread, propelled by Facebook groups and word-of-mouth. Whole families signed up, helping turn a vocational school of 41 students atop a Chinese restaurant into a for-profit juggernaut. Oxford Business College, unaffiliated with the elite school nearby, now has several campuses and more than 8,000 students. That transformation made millions of dollars for its owners, company records show.

Years of free-market changes to British higher education have created opportunities for for-profit schools like Oxford Business College. Through opaque partnership deals with publicly funded universities, schools can offer undergraduate degrees and get access to the British government's student aid. Some are marketed as ways to get an easy degree and quick money, in the form of about \$16,000 a year in government loans for living expenses.

"Join a university without any qualification and get up to 18,500 pounds," one advertisement on Facebook reads, listing no school, only a phone number and the money figure, which is about \$23,000. Dozens of similarly anonymous posts appear on Facebook groups for Eastern Europeans in Britain.

Higher-education experts say that partnerships between publicly funded universities and for-profit schools like Oxford Business College can prepare older students and those in underserved areas for better careers. Oxford Business College offers two-day-a-week schedules to working students and others who take non-traditional paths to higher education. Some students said the college offered opportunities that they otherwise would not have, and a national student survey showed strong approval ratings.

Many of the partnerships are new, and it is difficult to determine whether they help students land higher-paying jobs after graduation. The data, in general, is murky.

What is clear is that schools are making money in a fast-growing corner of the world-renowned British university system with little oversight. Regulators say the system is vulnerable to exploitation.

Oxford Business College has at least three partnership deals with accredited, publicly funded universities. Every new student admitted under these deals means tuition money for both the college and its publicly funded partner.

That created huge incentives to enrol students, former recruiters and interviewers recalled. Recruiters, known as "sales executives," said they were paid based on how many students they enrolled. Some students who struggled to speak English were admitted, according to more than a dozen students and former staff members.

Even applicants who plagiarised answers on admissions tests were given a second chance or, in at least one case, put forward for admission, according to internal messages among the interviewers, who tested the applicants' English. "He copied and pasted his answer from an online source," one interviewer wrote in a text message to his supervisor. "Pass him," she replied.

Many students said they were happy with the chance to learn business principles and improve their English. But others wondered how they would repay their loans and whether the school was adequately preparing them for good jobs. Interviewers questioned whether, with such a lenient approach, the students they passed could benefit from an undergraduate education.

Oxford Business College declined repeated requests for interviews over several months. In written responses to questions, the school said it offered educational opportunities to a diverse student body. It has robust admissions standards that are consistent with its peers and rejects 60% of applicants, said the school's director and co-owner, Padmesh Gupta.

In an October memo about fraud risks, England's higher-education regulator, the Office for Students, said that partnership agreements were at risk of exploitation. "Students may be registered without appropriate checks that their language qual-

ifications and skills are genuine," it wrote. Students may be pocketing living-expenses loans, it added, "without any intention of meaningful study."

Debates over for-profit colleges are common in the US. In England, they have emerged only recently, following changes that have made the higher-education system more like its American counterpart. But rules that exist in the US are not in place in England. For example, Oxford Business College offered its students a "golden ticket" of 250 pounds, or about \$310, for everybody they referred who enrolled. That practice is prohibited in the United States.

This business model succeeds in large part because of how England funds higher education. Universities used to be largely free, financed by direct government spending. That money has been steadily replaced by tuition and student loans. The loans cover tuition for the school and living expenses for the students, who are required to repay the money only after making \$34,000 a year.

Experts say it is good that schools tell low-income students that money is available. But the money should be pitched as a way to finance education, they said, not as the point of enrolling.

Buckinghamshire New University, the publicly funded school whose 2019 partnership propelled Oxford Business College's transformation, said that it had seen "no evidence of wrongdoing" but that it would pause recruitment through the college and assign staff members to oversee recruitment and academic programs there.

The University of West London, another

partner, said it was confident that its students at Oxford Business College met the same admission standards. Ravensbourne University London, a third partner, did not respond to questions.

In a brief telephone interview, Titiksha Shah, a dress designer who owns 60% of Oxford Business College, said she did not know how the school runs on a daily basis.

It has changed in recent years, she said, to become a "government-funded college."

Partnerships between publicly funded universities and other schools, known as franchising arrangements, have been possible for years in Britain. But only recently have they become so lucrative, experts say. That is because direct government aid has all but dried up and tuition is capped by law. Universities, particularly those that cannot attract higher-paying international students, are scrambling for revenue.

"The market has got a lot more competitive and desperate," said Mark Leach, the founder of Wonkhe, a higher-education research organisation in England. He called the nearly unchecked proliferation of for-profit schools through franchising a policy failure that would ultimately need reckoning with.

Ninety thousand full-time undergraduate students were enrolled as part of franchising arrangements in the past academic year. That number has nearly tripled in four years, according to the Office for Students. Regulators do not conduct checks on partnership deals, and academic data is not broken out by franchise agreements, making it hard to tell how students perform. NYT 2023/6/7



DH ILLUSTRATION: DEEPAK HARICHANDAN

# विवादों में उद्घाटन

यमुनापार में गुरु गोविंद सिंह इंद्रप्रस्थ विश्वविद्यालय का कैंपस शुरू होना दिल्ली में शिक्षा के क्षेत्र में बड़ी पहल है। कैंपस के उद्घाटन से पूर्व उद्घाटन को लेकर उपराज्यपाल और मुख्यमंत्री की दावेदारी भले विवादों में रही और उद्घाटन के समय भी भाजपा व आप समर्थकों ने नारेबाजी की, लेकिन आयोजन में एलजी व सीएम दोनों ने अपनी-अपनी बातें रखीं और कई महत्वपूर्ण बिंदुओं को रेखांकित भी किया। एलजी ने बताया कि 387 करोड़ रुपये से निर्मित विश्वविद्यालय में 346 करोड़ रुपये का योगदान विश्वविद्यालय ने स्वयं किया, जो इस विश्वविद्यालय के आर्थिक रूप से स्वतंत्र होने को दर्शाता है। मुख्यमंत्री का यह कहना भी महत्वपूर्ण था कि शिक्षा को रोजगारपरक होना चाहिए।

शिक्षण संस्थान के उद्घाटन में उपजा विवाद छात्रों पर दुष्प्रभाव डालता है, ऐसे में अतिरिक्त सावधानी व नैतिकता का परिचय आवश्यक है

इस सबके बीच यह भी अवश्य गौर किया जाना चाहिए कि एक शिक्षण संस्थान के उद्घाटन को लेकर किसी तरह का विवाद कितना उचित है? इस बात से भी इन्कार नहीं किया जाना चाहिए कि ऐसा विवाद उस शिक्षण संस्थान के छात्रों पर भी दुष्प्रभाव डालता है। ऐसे में जिम्मेदार पदों पर आसीन लोगों से ऐसे मौकों पर आचरण में अतिरिक्त सावधानी और नैतिकता का परिचय देने की अपेक्षा की ही जानी चाहिए। ऐसा होने पर छात्रों के मन-मस्तिष्क पर एक अच्छा प्रभाव छोड़ने में मदद मिलेगी और वे जिम्मेदार नागरिक के रूप में सकारात्मक ढंग से दिल्ली और देश के विकास में जुट सकेंगे।

# दोहरी मार का शिकार हिंदी भाषी परीक्षार्थी

**पि**छले दिनों संघ लोक सेवा आयोग (यूपीएसएसी) द्वारा आयोजित सिविल सेवा परीक्षा का परिणाम आया। पहले के वर्षों के विपरीत इस बार हिंदीभाषी परीक्षार्थियों में खुशी देखी गई। इसका कारण रहा कुल 933 सफल उम्मीदवारों में से 54 उन विद्यार्थियों का सफल होना, जिन्होंने परीक्षा के माध्यम के रूप में हिंदी भाषा का चयन किया था। यदि इसमें अन्य भारतीय भाषाओं में सफल होने वाले युवाओं की संख्या को जोड़ दें तो यह 75 के करीब हो जाती है। यानी कुल का करीब आठ प्रतिशत, जिसे अब तक की रिकार्ड सफलता कहा जा रहा है। यहां यह बताना जरूरी है कि सफलता के ये आंकड़े आधिकारिक नहीं, क्योंकि संघ लोक सेवा आयोग इस तरह का कोई अधिकृत आंकड़ा उपलब्ध नहीं कराता। आयोग अपनी वार्षिक रिपोर्ट में इस परीक्षा से जुड़े हुए न जाने कितने तरह के आंकड़े प्रकाशित करता है, जैसे कि सफल उम्मीदवारों की आयु, उनकी शैक्षणिक पृष्ठभूमि, विश्वविद्यालय, प्रयासों की संख्या, जाति, लिंग और विषय आदि-इत्यादि, लेकिन न जाने क्यों वह यह बताने से परहेज करता है कि सफल होने वालों में कितने-कितने युवा किन-किन भाषा माध्यमों के रहे हैं? आयोग यह भी नहीं बताता कि कितने युवा ऐसे रहे, जिनकी मुख्य परीक्षा में कापियां इसलिए नहीं जांची गईं, क्योंकि वे अनिवार्य अंग्रेजी विषय में उत्तीर्ण होने लायक नंबर प्राप्त नहीं कर सके, जबकि यह सब आसानी के साथ किया जा सकता है।

जब वार्षिक रिपोर्ट में यह बताया जाता है कि मुख्य परीक्षा में कितने-कितने युवाओं ने किस-किस भाषा को माध्यम के रूप में चुना है, तब फिर इसके अंतिम रूप को प्रकाशित करने में हिचक क्यों है? समझ में नहीं आता। यह गोपनीयता मन में कहीं न कहीं संदेह की भावना तो पैदा करती है। क्या आयोग इस संदेह को दूर करने के लिए कोई कदम उठाएगा? सिविल सेवा परीक्षा में हिंदी भाषा में सफल युवाओं की संख्या इस बार पिछले वर्ष की तुलना में दोगुनी है। इसलिए खुशी होना स्वाभाविक है, लेकिन जब दिमाग में यह तथ्य उभरता है कि वर्ष 1979 से ही भारतीय भाषाओं को इसके लिए अनुमति दे दी गई है तो अंदर उदासी और चिंता की एक लहर सी पैदा हो जाती है कि चार दशक से भी अधिक की यात्रा



डा. विजय अवावाल

**प्रश्नपत्रों के अनुवाद को लेकर यूपीएससी की विकट समस्या लाखों युवाओं के भविष्य को दांव पर लगा रही है?**



भाषाई भेदभाव करता संघ लोक सेवा आयोग फाड़ल में यह कहां तक पहुंच पाई है? निश्चित रूप से सिविल सेवा परीक्षा में हिंदी तथा अन्य भारतीय भाषाओं में सफलता का यह जो दयनीय प्रतिशत है, उसके अपने सामाजिक और आर्थिक कारण हैं। इन पर काफी विचार होते रहे हैं। इन कारणों की जड़ें इतनी गहरी हैं कि उन्हें उखाड़ फेंकना इतना आसान नहीं है, लेकिन जब बात प्रणाली की आती है, जो किसी संस्था द्वारा लागू की जाती है, तब उस संस्था के उद्देश्य एवं उसकी पद्धति का संदेह से परे होना आवश्यक ही नहीं, बल्कि अनिवार्य होता है।

हिंदी एवं अन्य भारतीय भाषाओं के प्रति आयोग का जो रुख है, दुर्भाग्य से वह संदेहास्पद है। इसका पहला और सबसे अधिक चिंताजनक एवं खतरनाक पहलू प्रश्न-पत्रों में उपयोग में लाई जा रही भाषा है। प्रश्न पत्र अंग्रेजी में तैयार होते हैं। फिर उनका हिंदी में अनुवाद कराया जाता है। सवाल यह नहीं है कि प्रश्न पत्र हिंदी में ही तैयार क्यों नहीं कराए जाते? सवाल यह है कि जो अनुवाद कराया

जा रहा है, वह कैसा है? कौन उसे अनुवाद कर रहा है? क्या वह अनुवाद समझ में आने वाला है? बेहतर होगा कि हम यूपीएससी की हिंदी का एक नमूना यहां देख लें। यह अंश गत 28 मई को हुई प्रारंभिक परीक्षा के प्रश्न पत्र से है। एक कथन है 'बैलिस्टिक मिसाइल अपनी पूरी उड़ान में अध्वनिक चाल पर प्रचार-नोदित होती है।' हिंदी के परीक्षार्थियों के सामने पहली सबसे बड़ी चुनौती यह होती है कि वे इस भाषा को समझें। कोचिंग देने वालों के पास इस समस्या का तोड़ इसके अतिरिक्त अन्य कुछ नहीं होता कि 'यदि हिंदी समझ में नहीं आ रही हो तो अंग्रेजी वाले अंश से समझने की कोशिश करो।' लेकिन क्या यह सुझाव व्यावहारिक है? यदि इन्हें अंग्रेजी आ रही होती तो वे अंग्रेजी को ही अपना माध्यम बनाते न। और यदि हम यह मान लें कि 'इतनी तो आ ही रही होगी', या 'इतनी तो आनी ही चाहिए' तो क्या उनके पास इतना समय होता है कि वे ऐसा करें। 120 मिनट में 100 प्रश्न हल करने होते हैं। प्रश्न इतने लंबे और जटिल होते हैं कि एक-एक क्षण कीमती होता है। यदि वे हिंदी और अंग्रेजी दोनों को लेकर चलेंगे तो प्रश्न पूरा कर ही नहीं पाएंगे।

एक बात और, जो हिंदी भाषियों से जुड़ी हुई है। भले ही कोई अपनी भाषा (संविधान की आठवीं अनुसूची में दर्ज) का माध्यम चुने, उसे प्रश्न पत्र हिंदी और अंग्रेजी में ही पढ़ने होंगे। जाहिर है कि यदि इन्हें अंग्रेजी आ रही होती तो वे उसे ही माध्यम बनाते। ऐसे में उनका भरोसा हिंदी पर ही होता है और 'गूगल महाशय' की हिंदी ऐसी है कि अच्छे-अच्छे हिंदी के विद्वानों की समझ में न आए। ऐसे में ये युवा अभ्यर्थी भाषाई स्तर पर दोहरी मार का शिकार हो जाते हैं। यहां संघ लोक सेवा आयोग साफ-साफ भाषाई भेदभाव करता हुआ नजर आता है। क्या सचमुच अनुवाद की समस्या का कोई हल नहीं है, जो लाखों युवाओं के भविष्य को दांव पर लगा रही है? जब तक इस समस्या का हल नहीं ढूंढ़ा जाता, तब तक इस परीक्षा में हिंदी तथा अन्य भारतीय भाषाओं के माध्यम वाले उम्मीदवारों की संख्या का बढ़ना संभव नहीं है।

(लेखक पूर्व सिविल सेवक है।)

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35/10

# NCERT's textbook revisions will hit low-income students hard

BY INVITATION



**PARVATI SHARMA**

Every day brings further details of deletions from NCERT textbooks that have been 'rationalised', it is said, to reduce the academic burden on schoolchildren post-Covid. The rationale of the exercise is unclear. India has the dubious distinction of having had one of the world's longest school shutdowns during the pandemic — almost two years — during which only a small fraction of students could afford to attend online classes. Despite warnings of the adverse effects of such prolonged lack of access to schooling — particularly on low-income students — little was done to correct matters. It makes equally little sense, now, for the NCERT to offer this reduced syllabus to students after the pandemic is past: when schools were closed, millions of children received no education at all; now that they are open, they are to receive rather less than more of it.

The specific deletions are worrying, too. Much has been written on the removal of an entire chapter dealing with Mughal rule. Other Muslim kings and dynasties occupy similarly reduced space. History is not static by any means; its methods and focus change with every generation. If the NCERT had chosen to replace dynasties with their subjects — with the histories of everyday people — its revisions might have sparked a more useful, even progressive debate. But it isn't only Muslim kings who are being excised from textbooks, but also chapters on social movements and people's struggles (including agrarian movements and struggles for the rights of forest dwellers, the Narmada Bachao Andolan, the history of the Dalit Panthers, etc.).

The changes in science textbooks are no less troubling. Charles Darwin and his theory of evolution are no longer to be taught in Class 10 textbooks, it seems. This deletion might appear quite arbitrary at first glance. There is a clear pattern that connects other deleted subjects — the Mughals, the role of the RSS in Mahatma Gandhi's assassination, social justice movements, and state excesses like the Emergency or the 2002 Gujarat riots. Such deletions — whether they serve to purge textbooks of 'anti-Hindu bias' or imbue them with pro-state feeling — dilute any understand-

ing of citizens' rights to be informed, protest and demand rather than lie low, applaud and obey.

Deleting the theory of evolution from textbooks may not seem to fit this larger idea, unless we see it in the context of the many non-scientific (indeed, anti-scientific) assertions that have been made by members of the ruling dispensation. Some years ago, a BJP chief minister claimed that ancient Indians had invented the internet. With specific regard to evolution, BJP MP Satyapal Singh has questioned and refuted Darwin's theory more than once, within Parliament no less. It is not hard to miss the upper-caste Hindutva pride that animates Singh's assertion that 'according to our culture we are children of rishis' — not monkeys.

While the NCERT's deletions from science textbooks may not have spurred as much debate as its social science deletions, they do appear to have worried schools much more. According to a report in *The Print*, several schools will continue to teach the deleted syllabus (including proof of the Pythagoras theorem and other

concepts fundamental to various scientific disciplines) because their students won't be able to compete in many entrance examinations otherwise. Reporting more recently on the deletion of the periodic table from the syllabus below Class 11, *HT* quotes a science teacher in a Delhi school who says they will continue "teaching the periodic table to Class 10 students so that they are well prepared when they get to study chemistry as a full-fledged subject in Class 11".

As was the case during the Covid pandemic, those who can

afford it will continue to receive a good education — their schools will continue to teach them the science they need to get ahead, their homes may well be stocked with books that explore Indian history and society without the blinkers. For the rest, however, the large majority of low-income Indian students for whom education is a vital — sometimes only — way of achieving better lives, the NCERT is reducing both access to knowledge and the ability for critical thought.

There was a time, NCERT textbooks used to tell its readers, when women and shudras were not allowed to study the Vedas. That line has been 'rationalised', but the control over education and access to power that it implied appears frighteningly resurgent. ■

Parvati Sharma is an author whose work includes biographies of Jahangir and Akbar



**TOUGH TO DIGEST:** For those who can't afford elite schools and don't have home libraries, access to knowledge has been further reduced

2023/6/20

# Sports development

With the North-east's first sports university, Sri Sri Anirudha Deva Sports University at Chabua in Dibrugarh district set to be fully functional in the near future, it should go a long way in fulfilling a long-standing need of the region. This is because Assam and the North-east have no dearth of sporting talents but the problem lies in our inability to spot talents at an early stage and groom them at the desired level. Sports education, too, has largely remained a neglected area and the multi-disciplinary sports complex can do a good job of enhancing sports education. The primary aim of the university is to prepare top-tier sports scientists, physical educationists, sports coaches, and distinguished researchers specializing in sport psychology, exercise science, sport biomechanics, sport medicine, sport physiotherapy and health education, sport technology, and sport analytics – all of which are actually an integrated whole in uplifting the overall sporting scenario. Indeed, these have almost been unheard of areas in the State and one expects the varsity to be a pioneer in this regard and act as a catalyst in bringing in some much-needed transformation to the sports scenario. Additionally, the university is mandated with the responsibility of directly assisting sportspersons by way of providing world-class infrastructure to train elite athletes and boosting the prospects of the country's medal tallies in international sporting competitions. Assam has undoubtedly witnessed a few of its sportspersons bringing global laurels in recent years. But the refreshing change notwithstanding, the State still has miles to go to make stellar performances a routine. Another positive sign has been that more and more youngsters are looking to sports other than cricket, with some making a mark as well. It is for our sports authorities to make the required interventions and sustain the trend. Matters such as talent hunt, providing modern training to the players, grooming next generation players and development of sports infrastructure assume utmost significance if we were to produce world-class sportspersons. Our sports federations in particular have their task cut out. They have the onerous responsibility of hunting and honing talent but regrettably, these have turned out to be rehabilitation asylums for politicians and bureaucrats who use it as their personal fiefdom. We also need a 'culture' of sports to produce world champions. This can happen when sports is actively promoted by the authorities as a routine linked to our daily lives. This calls for sustained investment in sports infrastructure at different levels.

AT/11/6

**Rishabh Khanna**

**T**he ability to pivot and change direction quickly is crucial for success in the classroom. Whether it is adapting to new curriculum requirements, integrating new technology into lesson plans, or accommodating the needs of students with different learning styles, modern teachers must be able to adjust their approach to meet these new challenges. This involves developing certain essential skills:

#### **Cultural competency and inclusivity**

Teachers today need to embrace diversity and create an inclusive classroom where every student feels valued, respected, and heard. By acknowledging and accepting students' differences, they can build a safe and supportive learning environment that encourages academic achievement. For instance, teachers can integrate culturally relevant materials and activities into their lesson plans to promote diversity and inclusion. They can also use inclusive language and actively listen to their students to understand and address their unique needs and challenges.

#### **Entrepreneurship skills**

With the rise of digital learning, traditional methods have become outdated, and teachers must constantly find new and innovative ways to keep their students engaged and mo-



GETTY IMAGES/ISTOCKPHOTO

## For the modern classroom

Teachers today have to develop diverse skill sets to ensure that their students become responsible citizens who can thrive in a fast-paced, interconnected world.

tivated. To do this, they need to tap into their inner entrepreneur and harness skills such as creativity, problem-solving, and critical thinking. For instance, instead of relying on traditional lectures and assignments, they can encourage students to develop their own online projects, such as creating a podcast or designing a digital game.

By doing this, students not only learn valuable digital skills but also become active participants in their learning process. The entrepreneurial mindset is crucial for developing effective digital teaching strategies and creating an excit-

ing and stimulating learning environment.

#### **Digital citizenship**

With the Internet becoming an integral part of our lives, it has become essential for teachers to teach students how to use digital tools in a responsible and ethical manner. Digital citizenship refers to the responsible use of technology

and the Internet, including online safety, privacy, and ethical behaviour.

One way to achieve this is by incorporating fun and engaging online resources that use interactive games and activities to teach students about digital citizenship. By making learning about online safety and ethical behaviour an enjoyable experience, they

can encourage students to take an active interest in their digital well-being. Moreover, they must model responsible online behaviour themselves. By using appropriate language, respecting others' privacy, and showcasing positive online conduct, they can lead by example and inspire students to do the same.

#### **Global competence**

In this era of globalisation, students need to develop a global perspective and understand different cultures and global issues. Teachers must help their students become informed and res-

ponsible citizens who can contribute positively to their communities and the world. For example, they can incorporate global issues and perspectives into their lesson plans, such as discussing environmental issues or examining cultural differences and similarities. Additionally, they can encourage students to participate in global learning initiatives, such as virtual exchange programmes or online international collaborations.

#### **Promote self-care**

In today's high-pressure academic environment, teachers must also focus on helping students manage their stress and nurture mental health and well-being by encouraging them to take breaks, practice mindfulness, and engage in physical activity. For example, mindfulness and relaxation techniques, such as deep breathing or yoga, can be incorporated into lesson plans. Additionally, schools should provide resources and support for mental health, such as counselling services or workshops, to help students develop healthy coping strategies.

Today's world demands that teachers have diverse skill sets to help their students succeed. By incorporating these skills into their teaching practice, they can help students become responsible citizens who can thrive in a fast-paced, interconnected world.

The writer is the Founder, and CEO of Surasa

12/6/23

# No textbook conspiracy

Misinformation about curriculum updates only creates cynicism about the education system



SANTISHREE DHULIPUDI PANDIT

RECENTLY, THE ALARMIST news was circulated that key concepts and segments, notably the theory of evolution and the periodic table, have been dropped from science textbooks by the National Council of Educational Research and Training (NCERT). The usual suspects took to social media to declare the death of secularism and scientific temper in India. The story received widespread global attention, including from *Al-Jazeera*, *Deutsche Welle* and the noted scientific journal *Nature*.

What was particularly concerning, in this case, was the circulation of unverified information on social media, which was further amplified by mainstream media. From one news outlet to another, the story expanded, sowing disinformation and confusion. This not only had an adverse impact on the reputation of the NCERT but also created scepticism about the country's education system. The government had already been working to dispel the negative image of the country's education system. No scientific theory is absolute — it can be contested. The latest debates that have questioned Darwin's theory of evolution need to also be a part of the curriculum.

The updating of textbooks is a regular process carried out by the NCERT, but one needs to understand these changes are not random. They are undertaken in specific contexts. First, some changes were made to reflect the changing realities — these include the incorporation of content related to information technology and computers. Second, the textbooks are revised in accordance with the reforms in the country's educational system. In this case, the landmark National Education Policy (NEP) 2020 is the torchlight — it "emphasises reducing the content load and providing opportunities for experiential learning with a creative mindset."

The current process of rationalisation is motivated by another critical factor: The effects of the pandemic on the educational system. There was a colossal loss of teaching time during the pandemic which, in turn, led to loss of learning and increased the load on the students. This was also a concern expressed by the Parliamentary Standing Committee On Education. Therefore, the process of rational-

isation was initiated to facilitate the "speedy recovery in the learning continuum and compensating time loss of students."

The NCERT was tasked with the rationalisation of textbooks across all classes and subjects. The process accounted for five broad criteria: Overlaps with similar content in other subjects within the same class; similar content in a lower or higher class; the level of difficulty; easily available content that does not require much assistance from teachers and can be undertaken through self or peer-learning; irrelevant content in the present context.

The controversy caused by confusion and misinformation is self-evident. Yet, what's surprising is the sheer absence of follow-up by the critics after the NCERT's clarification. Three observations need to be made in this respect. First, there is a need to gain perspective and separate facts from fiction. The periodic table has "not been removed from school education curriculum" but instead reassigned to Unit 3 in the Class 11 textbook. Darwin's theory of evolution is covered in "great detail" in chapter six of the Class 12 textbook. The missing reference to Maulana Azad from the Class 11 Political Science textbook (*Indian Constitution at Work*) is not a part of the current process of rationalisation. The reference was dropped from 2014-15 onwards — and that was finalised for printing in October 2013. Though the reference to Azad was not a part of the current rationalisation process, it ended up being linked with the larger controversy. So many leaders have not been mentioned in textbooks, even earlier.

The major chunk of confusion is caused by the deletion of some items that the critics argued were not included in the notification of the rationalisation. This has nothing to do with some conspiracy but is representative of the regular process of reprinting where minor deletions are not notified to avoid unnecessary confusion. Scrutiny should be lauded as long it is rooted in hard facts and evidence. Selective reading and mischaracterisation do not breed transparency or accountability but undermine them.

Second, the discussions have missed another important point — these textbooks are

for this year alone. Besides the larger synchronisation practice of textbooks to make them comply with the NEP 2020, the textbooks are supposed to be revised regularly by the Textbook Development Committee (constituted in 2005). This committee is mandated to develop the syllabus in line with the 2005 National Curriculum Framework (NCF). Each proposed change is first sent to the Textbook Committee, which is tasked to analyse and recommend them. Moreover, these are not radical transformations since reprinting textbooks to take care of the suggestions of stakeholders is a process that takes place every year.

Third, these decisions were taken by the expert panel. The rationalisation of textbooks is a need-based exercise to reduce content load because of the toll taken on the mental health of students during the pandemic. The NCERT arrived at these decisions after consultation with "in-house" domain experts, as well as 25 external specialists.

Changes and revisions in textbooks, and controversies thereafter, are nothing new. In 1978-79, a controversy over revising the contents of history books dominated the political space during the short tenure of Prime Minister Morarji Desai. In 2006, during the UPA rule, a chapter on Sikhism had to be changed because of enormous controversy. Another controversial incident occurred in 2012, when the Shahi Imam of the Fatehpuri Mosque in Delhi, Mohammed Mukarram Ahmed, demanded the removal of two mediaeval paintings from history textbooks arguing that their inclusion violated Sharia law.

However, the speed with which the controversy spread, despite India today being better placed in cross-checking facts than before, is concerning. Context and facts must be accounted for before any discussion is initiated. Learning about the menace of disinformation is an education in itself. The NCERT controversy shows how easy it is to spread misinformation, but more importantly, how necessary it is to counter misinformation.

The writer is Vice Chancellor, Jawaharlal Nehru University

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DINESH SOOD

# India can be a global skill capital

A sizable section of the population is employed in the unorganised sector, and many of them have underutilised skills

**N**ew entrants to the workforce will need to be skilled and made employable if India's economy is to stay competitive on a global level while it goes through structural changes, technological advancements, and changes in demographics. Using the same logic, it is predicted that an extra 70 million people who are working age (15-59) will be in the labour force by the end of 2023. This number has been computed using the country's current population. As a consequence, 59 million more young people (15 to 30 years) will be employed, raising the overall number of persons in the labour force to around 404.15 million. According to the findings of the periodic survey of the labour force, mechanisms for reskilling and upgrading the capabilities of the current workforce, as well as the official recognition of skills that have been acquired informally, will need to be enhanced in the future.

Given this circumstance, India is taking creative action to maximize the potential of its population that fuels the country's economy. Additionally, skilled workers can move from India due to the ageing populations that are present in many developed nations, which is favourable for both the nation that is hosting them and the one to which they are migrating. Consequently, both countries gain. Three key challenges may divert India from developing its workforce as skills required at a global level: first, there aren't many trustworthy avenues for foreign travel; second, the public and private sectors don't work together; and third, there aren't enough women in the workforce.

## INTERNATIONAL MOBILITY

The India International Skill Center (IISC) program and other organized initiatives might help India achieve its goal of becoming the "skill capital" of the world. In April 2022, the state of Odisha, where Dharmendra Pradhan is the current Union Minister for Skill Development and Entrepreneurship, hosted the official opening of the first IISC. The development of 14 IISCs across



India was planned for the year 2018 as a pilot project for the NSDC. In reality, India should turn the IISCs into a national organization. The NSDC must now decide to construct 30 IISCs in a public-private partnership to carry out the Pravasi Kaushal Vikas Yojana (PKVY), a program for young people who are seeking opportunities outside of India, after the introduction of the Union Budget 2023-2024.

To advise and guide prospective immigrants, a new network of IISCs will conduct International Internship and Student Certificate (IISCSC) Program with a focus on skill assessments, upskilling, language learning, and pre-departure orientation. There is a further need to establish government-to-government and business-to-business connections with new markets, such as those in Western Europe, Canada, Australia, and East Asia, which is required to increase the mobility of India's blue-collar and white-collar workforce.

There are 262 million working people in India over the age of 30 years, 259 million of them are now employed and need future preparedness. To promote reskilling and upskilling programs, build tight business ties, and prepare the workforce for cutting-edge technology and the workplace



IF EMPLOYERS  
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of the future, several skill development options may be used. These models can be utilized in a variety of contexts. These techniques include on-the-job training directed by the industry, market-driven training, and apprenticeship programs. In India, a sizable section of the population is employed in the unorganized sector, and many of them have underutilized skills. Even though a substantial majority of India's workforce works in the unorganized sector, this is still the case. Since having a formal certification may improve a person's bargaining skills, interventions based on the notion of "Recognition of Prior Learning" (RPL) are crucial in this circumstance. According to the findings of many surveys, persons who had earned their RPL certification made an average monthly salary that was 20% greater than those who had not. Both full-time and contingent workers encountered this.

Over 390 million individuals in India, according to the findings of a survey performed by the Centre for Monitoring Indian Economy (CMIE), have acquired skills outside of the job. It's possible that a combination of self-study, on-the-job training, and natural talent, helped these folks build their abilities. One of the most significant and urgent strategic

concerns for India is the creation of new entry points for the country's thriving private sector to engage in political decision-making. Information asymmetries are one example of a market failure that prevents people from improving their talents; a competent person is aware of their skills, but a potential employer is not. If employers had access to all the information, they would be more likely to be prepared to pay more for a skilled employee. RPL is one kind of intervention that might be employed to address the identified informational imbalance. The persistent problem of low levels of female participation in the labour force is a third factor that casts doubt on the health of the economy. There are presently 395.2 million individuals working in the country, but only 91.6 million of them are women, according to data gathered from the labour force census. The use of skill-building activities in conjunction with a stronger push for empowerment, which includes the provision of economic opportunities, gender sensitization, as well as financial and social aid, may be able to increase this number.

(The writer is co-founder and MD, of Orate International, a training partner with the National Skill Development Corporation)

# Stakeholders must play a role in school syllabus

SUPRAKASH CHANDRA ROY

A report published recently in the Nature and in other newspapers that the National Council of Educational Research and Training (NCERT) has removed the Periodic Table, Darwin's theory of evolution and some other foundational topics related to source of energy and environmental sustainability from the school syllabus has raised eyebrows for obvious reasons. The social media is flooded with comments, condemnations, and opinions.

Readers may be taken by surprise to learn that similar attempts were made in some school boards in the USA almost a quarter century back, that is at the beginning of this century. One may remember an article by this author published in the 20 May 2001 edition of The Statesman, arguing against such a move when a religious group known as 'Creationists' removed Darwin's theory of evolution, the geological theory of plate tectonics, cosmological 'Big Bang' theory from the school curriculum.

The only difference is that in the USA, the protagonist was a religious fundamentalist group, whereas in India the action has been initiated by NCERT, an autonomous body under the Ministry of Education, responsible for formulating the education strategy and programme for schools and higher education in India.

The periodic table is not just a catalogue of elements arranged in rows and columns with chemical symbols, atomic numbers, and their masses. In 1869, Dmitri Mendeleev started with 63 elements known at that time, arranged the elements with similar properties in a certain formation (columns) so that the characteristic of any element could be judged just by

looking at its position on the table. One of the unique aspects of Mendeleev's periodic table was the prediction of undiscovered elements in the gaps that were left in the table with their atomic weights and characteristics. These predictions made the periodic table more interesting and a useful tool for research.

The periodic table has gone through many improvements with the progress of science. In recent times, the table has been used to predict and produce elements in the laboratory beyond the naturally occurring elements. The table further provides other information such as the size of the atom (atomic radius), ionization energy (the energy required to remove an electron from an atom), electron affinity (the amount of energy released when an atom forms a negative ion), and electronegativity (an atom's tendency to attract a pair of electrons). This information becomes useful for myriad fields of science and technology.

During the International Year of the Periodic Table in 2019 marking the 150th anniversary of Mendeleev's publication of the Periodic Table, UNESCO proclaimed "The Periodic Table of Chemical Elements is more than just a guide or catalogue of the entire known atoms in the universe; it is essentially a window on the universe, helping to expand our understanding of the world around us."

NCERT has issued an official clarification on the step taken, saying that contents of the textbooks have been rationalised in order to reduce the load on students. The periodic table has not been removed from the entire school curriculum — just that it will be taught to science students of classes 11 and 12. Introduction of elements, their chemical symbols, formation of compounds, acids, bases and salts,

metals and non-metals; carbon and its compounds will be covered in classes 9 and 10. The author emphasises that the periodic table being such an icon of chemistry cannot be completely ignored for all students. It could have been introduced to the students at classes 9 and 10 (which is still a common class for all) while finer details and their applications to different fields could be left for teaching at higher classes.

Most of the scientific discoveries, if not all, have a (hi)story behind them. Even a dilettante has a role in spreading science and scientific ideas. Science topics could be made more captivating if a bit of history of its origin could be conveyed in the form of 'story-telling' which, then will be far more enjoyable to the students. The periodic table fits well into this category. NCERT could include some such stories in their textbooks which the teachers could use to make the learning process more interesting to students.

Evolution in the broadest sense teaches us that the universe has a history and significant changes have taken place over time. If we look at the galaxies, the stars, the planet Earth, and especially at life on Earth, we can see that things today are very different from what they were in the past. Galaxies, stars, planets, and life forms have slowly evolved over time. Biological evolution refers to the scientific theory that living things share similar ancestors, from whom they have gradually diverged. Darwin called it the "descent with modification". There is abundant and consistent evidence in the areas of astronomy, physics, biochemistry, geochronology, geology, biology, anthropology, and other sciences to show that evolution has indeed taken place.

What still lies in the shadow, however, is the knowledge of how

evolution has taken place, and what could be the processes and mechanisms that produced the change. Some people, on the other hand, are not satisfied with the scientific reasoning and are at pains to establish that scientific laws do not support the theory of evolution. They argue that Darwin's theory of evolution violates the Second Law of Thermodynamics, on the argument that entropy can never decrease.

Entropy is considered as a measure of disorder, whereas evolution, they argue, is a process that moves from disorder to order and therefore violates thermodynamic laws. The scientific answer to this is that the laws of thermodynamics that we usually learn in our undergraduate classes are based on a "closed" or isolated system. There is enough scientific evidence to suggest that entropy can, and does, decrease in an "open system" where the system is allowed to interact with other external systems. In that sense, our earth is an open system as long as it interacts with other systems such as the sun.

In today's world, climate change and environmental sustainability (ES) are the most discussed and challenging issues. ES is about creating an equilibrium between consumerist human behaviour and the world we live in, which can be achieved by living in a way with minimum wastage so as to avoid unnecessary depletion of natural resources. Environmental sustainability needs to become a part of our life, just as we brush our teeth every morning for personal health, we should follow some basic rules for environmental sustainability which will improve the world's health and will bring gains for everyone. ES improves the quality of human life with minimum strain on the earth's supporting ecosystem, its resources and therefore, needs to be inculcated

from early in life.

The removal of fundamental topics related to source of energy and environmental sustainability is akin to depriving the young citizens of intellectual nutrition. One has to understand the effort needed to generate electricity from different sources in the modern society against the effort required to generate the same from fossil fuel (read coal) in the late nineteenth century. It is only then that people will appreciate its importance and impact. Unless the students understand the various sources of energy and their relationship with the earth's environment, they can not be expected to grow up as responsible citizens and achieve this environmental sustainability.

Ironically, the prediction made in the article in The Statesman two decades ago "What can happen in the United States today may happen in our country tomorrow" has become a stark reality. Since NCERT is a responsible body with no vested interest, it could have been done with better transparency. In this age of digital communication, maintaining transparency is not an issue at all. What NCERT could have done was to have opened up their recommendations for public viewing as a beta version seeking feedback from the citizens, especially from parents, teachers, academics, and incorporating those as much as possible. This could have avoided a lot of the backlash that is being faced today. After all, the citizens (read students) are the ultimate stakeholders.

The idea of New India is not only to produce educated Indians but more importantly, to create responsible residents with the core values of a conscientious citizen.

(The writer is an author and Member of the National Commission of History of Science.)

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# Reinterpreting Minute on Indian Education

## Macauley's trap

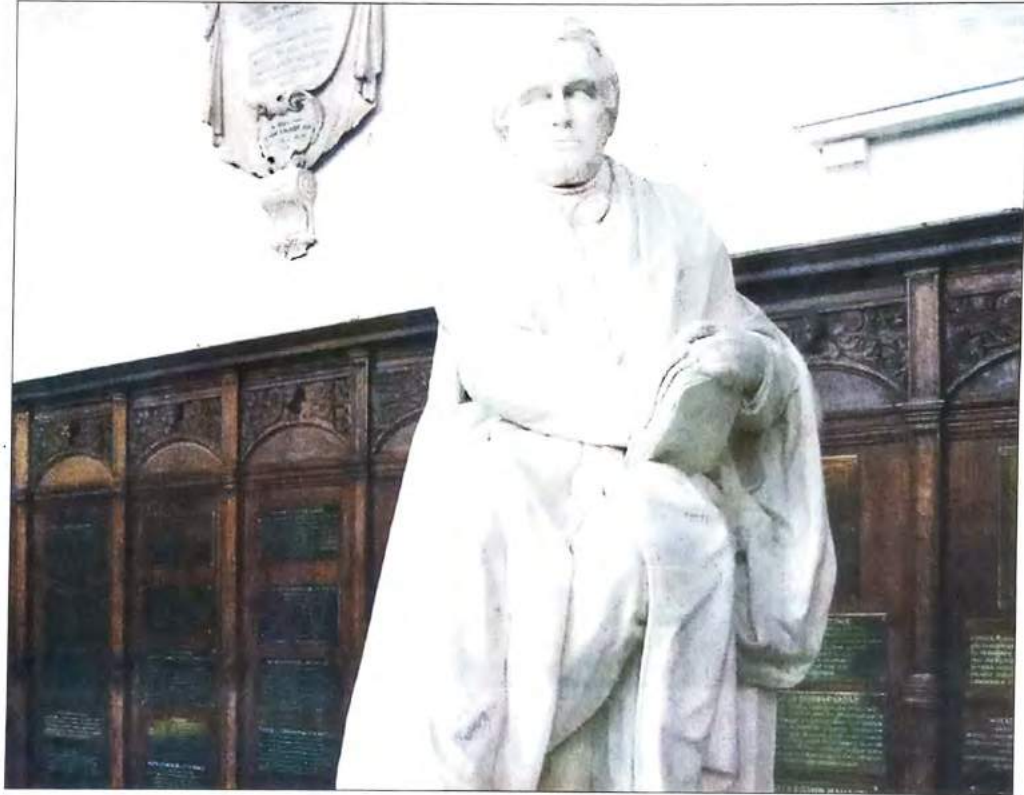
A. RAGHURAMARAJU

**M**odern education in India shares a complex relationship with India's independence and colonialism. The roots of today's education in India can be traced back to the colonial era, specifically to T.B. Macaulay. Macaulay's Minute on Indian Education played a crucial role in shaping modern education and society in India. They can also help us understand the multi-layered relationship with our colonial past.

Despite the underlying colonial ideas, Macaulay's Minute on Indian Education has no clear-cut binary between the Self and the Other — the colonial oppressor and the oppressed. This becomes apparent right at the beginning where, instead of two agencies, we find three, forming a triangle. The first was the British Parliament, which sanctioned one lakh rupees to promote Sanskrit and Arabic in India. Second were the Indians who received this grant to continue their education in these classical languages. And third, the enigmatic Macaulay and the committee appointed by the British Parliament to make recommendations for education in India.

Instead of supporting the British Parliament that appointed him, Macaulay opposed the Parliament's grant "for the revival and promotion of literature," which included only "Arabic and Sanskrit literature..." He recommended introducing modern education in India and stressed that the subjects taught in England, such as Milton's poetry, Locke's metaphysics and Newton's physics, should be taught in India too. Macaulay challenged the British Parliament when he made a strong case for introducing modern education in India. This can be seen retrospectively as a positive contribution. But in doing so, Macaulay complicated the conventional relationship between the ruler and the ruled. An agent of the ruler himself, he took up a position against another agency from the ruling side.

It must be noted that in making this move, seen within the triangle, Macaulay shifts away from the British Parliament and towards the people of India. Many reject Macaulay based on what he said about Indian classical knowledge: "It is, I believe, no exaggeration to say that all the historical information which has been collected from all the books written in the



Sanskrit language is less valuable than what may be found in the most paltry abridgements used at preparatory schools in England." While Indians have reasons to feel insulted by Macaulay's summary dismissal, reacting emotionally does not allow us to understand the strategy and the politics underlying Macaulay's trap. There are two levels to this trap. At one level, it must be conceded that Macaulay's recommendation of modern education for Indians is positive. As for his opinion on Arabic and Sanskrit, we must ask ourselves if continuing traditional education was truly desirable for modern India. How many Indians would want to send their children to these traditional schools today, even if they are not as bad as Macaulay had feared? Education in modern India, especially modern science, technology, commerce and industry, and radical political ideals, such as democracy, liberty, and freedom, stemmed from Macaulay's Minute. The implementation of Macaulay's education policy helped India progress faster and catch up with developed countries. The path initially promoted by the British Parliament would have stalled this progress. The explicit elitism and the dominant patriarchy would have kept lower castes and women, who constitute half of the population, away from education. In this sense, Macaulay's pro-

posal ultimately proved to be for the betterment of India.

However, there is also a trap here. Following Macaulay's recommendation, India opted — and rightly so — for modern education. But this was tantamount to accepting colonial rule as modern education was equated with the British. So the problem with Macaulay was not his positive recommendation but the justification for colonialism that was deeply embedded within this proposal.

The Indian leaders seem to have distinguished between the content and the carrier. They looked upon the British as the carrier but dissociated them from the content or the knowledge they helped bring into India. The Indians rejected the binary between classical and modern knowledge and made a case for both modern and classical. This was the underlying formula in the writings of Bankimchandra Chatterjee, Swami Vivekananda, and Sri Aurobindo. These philosophical founders of the Indian national movement wanted modern science in conjunction with traditional spiritualism. Novel and unprecedented, this approach resonated in the writings of these modern Indian thinkers.

This way of thinking was radically different from that of Macaulay who, in his doctrine on education, rejected any value in classical Indian knowledge and did not

consider the possibility of any defect or limitation in modern knowledge. However, the Indian thinkers accepted the modern education that was introduced by the colonisers and, at the same time, made a case for India's independence.

This brings us to yet another significant consequence of Macaulay's education — how it enabled India's freedom. Winston Churchill viewed Macaulay to be instrumental in the "proliferation of Indian nationalist leaders a century later."

**T**he triangle, the proposal, the descriptions, the deceptions, and the reversals in enabling the opposite of what was intended need to be carefully identified and understood in these complex Minutes. Dismissing Macaulay without a clear understanding of the realities around us will be an emotional knee-jerk reaction that is superficial and sentimental. But an unquestioning acceptance of his ideas without considering the in-built justifications for colonial rule in India, too, will be dangerous.

Therefore, it is imperative to closely study Macaulay's Minute on Education and analyse its different aspects to understand modern education and society in India. This is also necessary to recognise the novel attempt to circumvent the trap laid by him to continue colonial rule.

# Digital libraries

## A boon amid privacy concerns

**Virtual libraries have made access to knowledge easy while the global digital divide is growing, writes Tarun Arora**

**D**igital libraries have played a crucial role in promoting equitable access to knowledge. They have dismantled traditional barriers that have historically impeded many individuals from accessing information. The emergence of digital libraries has made it possible for people from diverse locations and socioeconomic backgrounds to gain an unprecedented wealth of knowledge.

Digital Libraries have broadened individuals' knowledge base, cultivated new skills and pursued educational opportunities that were previously out of reach. They have proven to be a vital tool in promoting educational equity and fostering intellectual growth on a global scale.

### Bridging the global digital divide

The digital divide represents a disparity between individuals who have access to digital technology and those who lack such access, including the capacity to use it efficiently. To mitigate this divide, digital libraries have emerged as a tool for providing universal access to information.

The National Digital Library of India (NDLI) a project under the Ministry of Education, Government of India provides access to over 4 million digital resources in multiple languages. The resources include books, journals, audiobooks and video lectures, among others. The platform also supports access for users with disabilities by providing features such as text-to-speech and screen readers.

Digital libraries serve as an online repository of digitised resources, such as books, journals, multimedia and articles. These resources are easily accessible from anywhere, making them invaluable in providing information to individuals and communities who lack access to physical libraries or information centres.

Digital literacy was a key element in closing the digital divide in India, according to a 2017 study by KPMG India and Google. About 26% of internet users in India are women and about 17% come from rural areas. Digital libraries have the potential to significantly increase information access for marginalised communities while enhancing digital literacy.

### Empowering communities

Digital libraries can facilitate collaboration among researchers, scholars and students from different parts of

the world. They can share information, work on joint projects and advance knowledge in their respective fields. This can lead to the development of new technologies and solutions that can benefit society.

The Digital

Empowerment Foundation (DEF) is an initiative in India that aims to provide digital access to underserved communities. It has established community information centres (CICs) that allow for digital access to resources, including the National Digital Library of India (NDLI). Additionally, these centres offer training on how to effectively use digital resources and technologies. Consequently, these initiatives have proven to be effective tools for bridging the digital divide.

Digital libraries provide equal access to knowledge, particularly for individuals from disadvantaged backgrounds, offering a vast range of resources to enhance skills and knowledge. They open new doors for success in the digital era, making it possible for everyone to benefit from the transformation of learning.

### User privacy in the digital age

While the use of digital libraries continues to grow, there is a pressing need to ensure that the privacy of users is protected. With the potential for data profiling and tracking, there is a risk that individuals' reading habits could be used for purposes that violate their privacy and human rights.

To address such concerns, it is essential to implement data protection laws to ensure that the data collected by digital libraries remains private and is not used for purposes other than providing access to educational resources. The laws would also ensure that individuals have control over their data and can choose what they want to share with third parties.

To address privacy concerns, libraries can implement privacy policies and conduct regular security audits.

### Democratising knowledge access

Digital libraries have revolutionised access to knowledge, providing an inclusive platform for people to access information irrespective of their location or status. Unlike traditional libraries, digital libraries do not require physical space or resources, allowing them to offer a vast collection of materials. This has made it possible for individuals, particularly those in underdeveloped areas, to access an abundance of knowledge.

A 2021 survey conducted by OCLC, a worldwide library cooperative, examined the impact of the Covid-19 pandemic on academic library usage. The survey revealed a significant rise in the use of digital resources in academic libraries, with e-books and online journals being the most accessed materials.

American Library Association (ALA) released a report in 2020 strongly advocating intellectual freedom and equal access to information and has published many statements. The ALA's core values include a commitment to diversity, equity, and inclusion and the organisation works to promote these values in libraries and library services.

As technology evolves, digital libraries will continue to be critical drivers in the global effort to democratise knowledge and ensure equal access to information for all.

(The author is the founder of a digital library platform)



# E-education platforms, their Generative AI chapter

**S**alman Khan flourished even at the peak of the world economic crisis of 2008. The Khan Academy's online education videos attracted thousands of learners that year. It has gone from strength to strength since then. Khan's not-for-profit enterprise is funded by the likes of the Gates Foundation, Google and Elon Musk. Today, the academy has 130 million learners from across the world, ranging from school-goers to graduate-level learners. Such is the enduring popularity of online education.



**A. Damodaran**

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## Scaling up

As the world recovered from its economic setback by 2011, a new genre of online courses titled 'Massive Open Online Courses' (MOOCs) made their entry, driven by reputed institutions of learning. Though MOOCs have been around since 2008, their institutional origins can be traced to three free online courses offered by Stanford University in 2011. Peter Norvig, Sebastian Thrun, Jennifer Widom and Andrew Ng conducted these courses. Buoyed by the large turnout of learners for these 'pilot' courses, Thrun launched his online education outfit, 'Udacity', in late 2011 as a for-profit company. A year later, Andrew Ng and Daphne Koller followed suit with their venture 'Coursera', which was also registered as a 'for-profit' company.

Not to be left behind, MIT and Harvard joined forces to create 'edX' in May 2012, as a non-profit MOOCs Company. Anant Agarwal, the visionary founder of edX, is widely credited with open sourcing and internationalising the company's 'open edX tech stack'. Although edX was acquired by the for-profit EdTech company, '2U', in November 2021, the company continues to follow 'non-profit considerations when it comes to servicing its open-source stack.

All the three outfits succeeded in launching MOOCs on a global scale, in partnership with the world's leading universities and institutions. As far as India is concerned, the Indian Institute of

Technology Bombay and the Indian Institute of Management Bangalore have been the early movers. Both institutions offer a variety of MOOCs courses through the edX platform.

As of 2021, there existed nearly 35 MOOCs Learning Management Systems (LMS) spread across North America, Asia and Europe. The list of large LMS platforms from the developing world includes India's 'Study Webs of Active-Learning for Young Aspiring Minds' (SWAYAM) launched in 2017 by the Ministry of Education, Government of India. It is one of the world's largest learning e-portals. According to 'Class Central', the number of MOOCs learners in the world (excluding China) was 220 million in 2021. Coursera accounted for 97 million learners, while edX and India's SWAYAM had enrolments of 42 million and 22 million, respectively.

## Why Generative AI?

Despite their seemingly high enrolment numbers, the financials of MOOCs platforms are fragile. The operating expenses of a MOOCs platform are high, partly due to maintenance expenses associated with the LMS tech stack, and partly due to steep marketing costs incurred for enlarging the learner base. On the revenue side, the practice of offering entry-level courses *gratis* (or at low fees) aggravated the financial crunch faced by these platforms. Although MOOCs platforms, by and large, rely on degree-earning courses to earn revenue, such courses have few takers. A key metric that determines learner enrolments for MOOCs is the probability of potential learners discovering LMS platforms through web-based search engines. Even when a learner stumbles on a platform of her choice, she would still struggle to locate courses that suit her needs from the crowded portfolios of Coursera, edX and Udacity. What compounds the problem is the high rate of dropouts by entry-level learners. In turn, drop-outs reduce the catchment of learners for degree granting programmes.

These factors perhaps explain why Coursera, edX and Khan Academy have gone in for regenerative AI. edX's Chat GPT plug-in helps aspiring learners to successfully locate platforms and courses that suit their requirements. The Khan Academy's chat box 'Khanmigo' challenges learners with thought-provoking questions, while edX's 'edX Xpert' and Coursera's 'AI Coursera Coach' function as virtual assistants that answer queries, provide feedback on assignments, generate quick summaries of voluminous content, and swiftly turn out exam scores. As learning gets interesting and engaging, drop-outs are bound to come down, resulting in more learners progressing to degree granting programmes.

## In India

India's SWAYAM has yet to spell out its approach to AI. However, the platform is in for interesting times. The SWAYAM-user community will drastically scale up by 2025, when India's active Internet users become 900 million strong. This rapid scale up will necessitate the utilisation of AI-based learning and teaching services by institutes affiliated to the platform. Unlike the United States and Europe-based platforms, SWAYAM is publicly funded and is driven by the National Education Policy's tenets of inclusivity and cross-disciplinary learning. Indeed, in the coming years, the drift of SWAYAM courses is more likely in the direction of cross-disciplinary course offerings that utilise unstructured data. SWAYAM is thus ideally positioned to derive benefits from the evolving semantic web.

Time will tell whether regenerative AI tools will really shore up the economic fortunes of online education platforms. What is clear at the moment is that global online education brands will not shy away from experimenting with regenerative AI tools.

Global online education brands do not seem to be shying away from experimenting with regenerative AI tools

**FIFTY YEARS AGO** JUNE 13, 1973

# Need to evaluate books to promote integration

New Delhi, June 12: The committee of educationists and student leaders has recommended a continuous evaluation of textbooks in order to ensure that material prejudicial to national integration is eliminated. Several recommendations relating to further expansion and strengthening of national integration programmes have been made by the committee which concluded its daylong meeting yesterday. The Prime Minister, Mrs. Indira Gandhi inaugurated the meeting and the Education Minister, Prof. Nurul Hasan, presided.

A recommendation of the committee was that a large amount of literature should be published and disseminated which would strengthen and promote the concept of national integration. "In this context, there should be a continuous evaluation of textbooks in order to ensure that material prejudicial to national integration is eliminated." According to the recommendations, national integration programmes already under implementation should be further strengthened and expanded. "Besides the entire programme should be given more depth and concreteness through a variety of curricular and extra-curricular programmes."

# Engage children in environmental issues



SONALI KHAN

Schools should incorporate environmental education into their curricula, fostering a sense of environmental stewardship from an early age

“How long does it take for a plastic bottle to decompose?” asked the teacher to a class full of children and parents at a monthly parent-teacher meeting. The answer: 500-700 years left everyone startled and gave each other a look of shock. The next question was, “How much plastic waste is generated in Delhi alone?” The answer: According to an assessment carried out by the Delhi government’s environment department in 2020, Delhi generates 1,060 tonnes of plastic waste every day, explained the teacher. A group of parents and children stood up to commit to using cloth bags and reusable water bottles, along with motivating their peers to adopt sustainable practices as small as these:

Children are the most vulnerable to the effects of air pollution and environmental changes. They are also the ones who will inherit the planet, so we must listen to their voices and empower them to be agents of change. India’s environmental challenges are extensive, encompassing air and water pollution, scarcity of food and water, inadequate waste management, and biodiversity loss.

One promising avenue lies in empowering children, who possess a unique perspective and untapped potential to contribute to environmental solutions. As future custodians of the planet, they will bear the burden of environmental degradation. By involving children as stakeholders in decision-making processes and policy discussions, their creativity, innovative thinking, and passion can be harnessed to shape a sustainable future. However, empowering children goes beyond tokenistic gestures; it requires meaningful participation, genuine inclusion of their perspectives, and the protection of their rights. Adoption of innovative approaches is needed to engage children in the journey to build their stewardship for the planet and do what is best for themselves, their homes, and the community around them.

Through initiatives like ‘Mera Planet Mera Ghar,’ children have actively engaged with environ-



mental concerns to adopt sustainable practices and influence the community and policymakers, thus exemplifying a paradigm shift in recognizing children’s agency in environmental stewardship. This initiative is making significant strides in empowering children and amplifying their voices on environmental concerns in their communities. Through surveys, interactive activities, science-based experiments, workshops, and community events, the initiative provides children with a platform to build environmental stewardship, express their views, and develop a deep understanding of environmental challenges and their implications. However, genuine empowerment requires a comprehensive approach that encompasses educational reforms, policy changes, and collaboration among media, civil society organizations, the government, and, most importantly, the citizens of India. Along with this, there is an acute need to engage children where they are and empower them to take immediate steps so that they can make sense of their environment and adopt sustainable behaviour as a life-long practice. By incorporating

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environmental education into curricula, prioritizing children’s participation in decision-making processes, and creating platforms that amplify their voices, India can unlock the full potential of empowering children and building a sustainable future. To fully realize the potential of empowering children as environmental stakeholders, broader systemic changes are necessary. Educational institutions should incorporate environmental education into their curricula, fostering a sense of environmental stewardship from an early age to enable the adoption of behaviours for sustainable practices.

Campaigns like ‘Mera Planet, Mera Ghar’ have shown tremendous potential in engaging children in environmental issues and promoting sustainable practices. Through science-based experiments, interactive workshops, and multimedia content, the campaign educates children about the environment and empowers them to become agents of change.

The involvement of local leaders, parents, and NGO partners ensures that children’s voices are heard, and their demands are taken seri-

ously. The campaign’s success in reaching millions of people through social media platforms and generating significant engagement highlights the importance of collaborative efforts between various stakeholders. While empowering children and incorporating environmental education into the curriculum are important steps, it is crucial to acknowledge the limitations and potential drawbacks of such approaches.

Decision-making processes should balance children’s involvement with their age-appropriate understanding of complex environmental issues. Short-term campaigns may fail to bring about lasting behavioural change or significant policy shifts. Environmental challenges require sustained and systemic changes that go beyond awareness-raising and educational initiatives. Therefore, it is crucial to complement these efforts with comprehensive policy reforms, investment in infrastructure, and stronger regulations to address the root causes of environmental problems.

(The writer is Managing Trustee, of Sesame Workshop India Trust. Views expressed are the personal)

# Choosing right preschool for children with needs in mind

**SHALINI SHARMA**

A study by the center on the developing child, Harvard University stated that in the first few years of life, more than 1 million new neural connections are formed every second. After this period of rapid proliferation, connections are reduced. This data underlines the fact that young children's brains are more sensitive to new learnings than older children's brains. Thus, exposing developing minds to a suitable learning environment during their formative years is imperative to create the ideal conditions for their further development. Here, choosing the right preschool plays an integral role in shaping the future growth of children.

When selecting an ideal playschool for your children, it is essential to understand their needs and requirements and see what type of setting would deem fit for them. Play is the highest kind of research, as Albert Einstein emphasizes, and given how young students are, this is especially true. Exploring and playing with the different aspects of a subject will not only feed their innate interest but will also sharpen their cognitive talents, empowering them to come up with original solutions. Hence, finding a preschool that fosters a child-friendly and comfortable environment will not only allow your child to learn and understand better but will also assist their ideal growth and development.

## SIGNIFICANCE OF RIGHT PRESCHOOL

Encourages curiosity and creativity: The time when students were mere spectators in classrooms has long passed. Today, the focus is on exposing children to real-world situations through a play-and-learn methodology that piques their curiosity and stimulates their minds. A preschool gives young children a platform for experiential learning and promotes discovery with the aim of helping them come to their own conclusions about things. Rather than feeding children with the



predefined concepts of right and wrong, preschool fosters a dynamic environment for students, which stimulates their originality and curiosity.

## ENHANCES COGNITIVE ABILITIES:

It has become a standard custom for parents to feed their children according to their own worldview. Students' ability to comprehend and decipher things on their own is subsequently hindered, and they are prevented from developing their own opinions. By exposing them to challenging situations through interactive activities, preschools encourage developing minds to understand the issues independently and come up with unique solutions. This, as a result, facilitates their ability to think critically and analytically, which in turn fosters their creativity and proves valuable as they mature.

## BOOST COMMUNICATION SKILLS:

Even while children learn to speak at home, the ideal preschool gives them the opportunity for ongoing interaction and exposure with children of their own age, which improves their communication abilities. Role plays and other play-based learning activities introduce children to rich languages, which enhances their vocabulary and fosters communication and interpersonal skills.

## RIGHT PRESCHOOL: FOUNDATION OF IDEAL CHILD GROWTH

There is no getting around the reality that the environment you expose your children to during the formative years is extremely important in laying the groundwork for their future development. In this case, a good preschool is essential for helping young children with their academic, social, and emotional development. Exposing them to various situations in the form of different play-based activities not only improves their thinking

capacity but also their ability to comprehend and react to situations as they grow. According to multiple studies, high-quality early learning, early childhood education, and early childhood development (ECD) programs reduce dropout and repetition, thereby improving outcomes at all levels of education. A strong Early Childhood Education leads to better learning outcomes, including higher civic responsibility and lower delinquency rates, among others.

In a country like India, with 139 million children under the age of six years, focusing on Early Childhood Education becomes pivotal for accelerating the overall growth of the country. Various education policies and programs illustrate the emphasis placed by the government on holistic ECCE. The National Education Policy 2020 also lays significant importance on the early childhood education segment.

The author is CEO & founder of HI KALPAA  
Start

# Education, alcoholism and shattered dreams

■ Dr Pradyumna Goswami

Educational institutions serve as the breeding ground for the nation's future leaders, thinkers and change-makers. However, an alarming issue that plagues these institutions is the prevalence of alcoholism among students, with a devastating impact on their lives. This alcohol abuse not only poses a serious threat to their academic performance and personal well-being but also contributes to a significant number of road accidents. The number of road fatalities due to drunken driving is quite significant in India. Many lives have been lost on the road due to the irresponsible act of a drunk driver. As per the latest report by the Ministry of Road Transport and Highways on road accidents in India, drunken driving is the third major cause of road fatality, with the first being overspeeding followed by lane indiscipline.

Traditionally, alcohol consumption has been stigmatised in Indian society. But in recent times there has been a shift towards more liberal attitudes, with alcohol being perceived as a marker of social status, modernity and freedom. Alcohol consumption among students has been on the rise in India, particularly in colleges and universities. Especially in Assam, alcoholism is a concerning issue that needs to be addressed. These students, who should be nurturing and shaping the future of the state, are the victims of alcohol

abuse among their residents. Hostels in educational institutes often become hubs for alcohol consumption due to various reasons, viz., peer influence, stress and academic pressure, lack of supervision and availability and accessibility. Peer pressure plays a significant role in encouraging students to engage in alcohol consumption within the hostel environment. Students may feel compelled to conform and participate in drinking activities to gain acceptance or fit in with their peers.

The demanding nature of academics and the stress associated with examinations and assignments can drive some students towards alcohol as a means of escape or temporary relief.

The absence of strict monitoring and supervision within hostels can create an environment where alcohol consumption goes unnoticed or unchecked, making it easier for students to indulge in excessive drinking. Easy availability of alcohol within the vicinity of educational institutes, coupled with lax enforcement of age restrictions, makes it convenient for students to procure alcohol.

In Assam, the licensing of wine shops by the Govt of Assam has sparked concerns about the negative consequences on society and individuals. While the government's intention may have been to generate revenue and regulate alcohol sales, the ramifications of this decision have raised valid con-

cerns about public health, social fabric and the overall well-being of the people of Assam.

Peer influence and easy availability and accessibility play a significant role in destroying hostel environment. In an attempt to fit in socially or cope with academic pressures, some students turn to alcohol as a means of escape, unaware of the potential dangers it poses.

Alcoholism in hostels of educational institutes has severe consequences on students' physical and mental well-being. Excessive alcohol consumption leads to a range of health issues, including liver damage, cardiovascular problems, weakened immune system and increased vulnerability to accidents and injuries. Alcohol abuse adversely affects students' academic performance, leading to a decline in concentration, motivation and overall productivity.

Alcoholism often coexists with mental health disorders such as depression, anxiety and substance abuse disorders. The combination of these issues can exacerbate emotional distress and hinder students' ability to cope with academic and personal challenges effectively.

Consumption of alcohol significantly impairs one's cognitive and motor skills, making it extremely dangerous to operate a vehicle. Unfortunately, many students indulge in binge drinking or consume alcohol before driving, leading to a rise in road accidents. These accidents not only endanger the lives of the students themselves but also pose

a grave threat to pedestrians and other drivers on the road.

Efforts to address alcohol consumption among students should prioritise a holistic approach that focuses on promoting overall well-being, responsible behaviour and a supportive environment for students to thrive academically and personally. To combat the issue of alcoholism in Indian educational institutions and especially in hostels of educational institutes in Assam, a comprehensive approach is necessary. Educational institutes should prioritise awareness campaigns that highlight the risks of alcohol abuse, promote responsible drinking and educate students about available resources for support and rehabilitation.

Establishing peer support groups within hostels can provide a platform for students to support and encourage each other to make responsible choices, resist peer pressure and seek help when needed. Access to counselling services and support systems helps students deal with stress and peer pressure. On-campus counselling services should be readily available, offering confidential support to students struggling with alcohol addiction. Intervention programmes should focus on early detection and timely intervention to prevent the escalation of alcohol-related problems. Educational institutions should collaborate with law enforcement agencies to conduct regular checks for alcohol and drug abuse. This collaboration can help create a safer environment for students and deter them

from engaging in risky behaviour. Moreover, they should collaborate closely with local law enforcement agencies to enforce strict regulations on the sale of alcohol near campuses and discourage underage drinking.

Most importantly, educational institutes must implement and enforce strict policies prohibiting alcohol consumption within hostels. Regular monitoring and stringent disciplinary action against violators can act as a deterrent and create a safer hostel environment. Building a partnership with parents is essential to address the issue effectively. Regular communication and involvement of parents can help create a support network for students and foster an environment of open dialogue about the risks of alcohol abuse.

The issue of alcoholism among students in educational institutions in India is a matter of grave concern. The connection between alcohol abuse and road accidents underscores the urgent need to address this issue effectively. To prevent loss of life and mitigate the devastating consequences of alcohol abuse, concerted efforts are needed from educational institutions, parents and society as a whole. By raising awareness, providing support services and implementing strict regulations, we can create an environment where students can thrive without succumbing to the dangers of alcohol addiction. It is imperative that we take action to protect the well-being and future of our students.

# Falling school enrolment

The decline in enrolment in government schools from 75 lakh students in the preceding academic year (2021-22) to 70 lakh in the current (2022-23) is an indication of the lack of faith of a vast segment of the State's populace in the public education system. While the Education Minister has sought to play down the issue by attributing the same factors such as clearing of duplicate enrolment from the database, removal of long absentee students from the database, and wrong reporting by some schools, there can be no distraction from the reality that people – including from weak financial background – are increasingly opting to send their wards to private sector schools despite the burden of steep fees. The removal of long absentee students itself points to the incidence of school dropout. All this warrants the authorities to have a relook at the lacunae plaguing government-funded education and rectify the problem areas. Years of neglect have severely impeded the educational environment in these public schools, as corroborated by their uninspiring performances in board exams and the growing preference of parents for private schools. That the qualitative aspects of learning in many government schools are poor has been laid bare time and again by successive annual ASER education reports, especially in the rural areas. Unfortunately, the kind of response that the authorities ought to have made in the face of such a dismal scenario remains conspicuous by absence.

A plethora of ills – concerning teaching as well as infrastructure and a sound academic environment – presents a rather pathetic picture of our education system and raises serious long-term concerns about the system. Infrastructure deficiencies are particularly glaring in our schools, with many lacking basic facilities such as provision for drinking water or girls' toilets. A majority of the schools in the region do not have library books available. Private schools in the State are now indubitably an integral component of the education system and expanding rapidly. But the government cannot abdicate its responsibility to check the downward slide of the schools run by it. A thorough revamp of the government schools with thrust on improving the teaching standards and infrastructure creation is an urgent need. Training of teachers, too, should figure prominently in the revamp strategy. There should also be qualitative tests and the better performing schools should be incentivised. Effecting some much-needed changes in the government schools in terms of quality teaching and some special emphasis on the learning of English should be the area of the government's single-minded focus. It would also do well to take a leaf out of the functioning of government schools in Delhi where the government has done a splendid job in revamping public education. In Assam too, the Assam Jatiya Bidyalay has maintained an enviable record of qualitative teaching and is meeting the overall personality development needs of its students for the past two decades. The Govt can well learn from the experience of the school and put in place a similar arrangement for the schools under it.

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# Breaking barriers

*By enhancing awareness and self-efficacy through life-skills education, Room to Read has been strengthening girls' ability to identify and address gender-based constraints*

Nexus of Good



ANIL SWARUP

The National Education Policy (NEP) 2020 envisions the 21<sup>st</sup>-century learner to be confident, creative problem solver, inquiry-driven, capable of creating aspirational economic pathways and, above all, making informed decisions. In this way, it outlines the role of school as a change and capacitating agent that will nurture the future citizens as empowered individuals. While laying this aim, the NEP also recognises the challenges faced by socially disadvantaged groups; girls being one such group. It is also known that girls from other disadvantaged groups face double disadvantage. So, unless it is ensured that girls across the spectrum are being empowered through school education, we will not be able to reach the goal we have set for ourselves.

The attainment of gender equality in educational spaces, until now, has been marked by enrolment, retention, and pass rates. However, it is time to reflect on whether the process of school education is helping girls break gender-based barriers, and creating an empowering education for them. Now that we have a solid foundation of gains in terms of girls' enrolment in schools, we must examine whether schools are able to ensure a free atmosphere of being and learning for girls or if they are reproducing the same inequalities that girls struggle with at their homes and communities. If school education is to be empowering and liberating for marginalised girls, it must go beyond the domestication of girls, stereotypes, and biases that arise from gender-based socialisation.

Room to Read India adopts a pathway of strengthening girls' agency to identify and address gender-based barriers in their life journey and help them navigate key life decisions. They do this by assisting girls in enhancing their self-awareness, social awareness, and self-efficacy through life skills education training, mentoring, and engagement with their communities and families. Room to Read directly contributes to the SDG 5.

The organisation has been working with adolescent girls since 2003. Focusing on each individual girl, Room to Read's direct intervention provides



Through its direct intervention, Room to Read has impacted 29,715 girls to date

structured life skill inputs to girls from grades 6 to 12. With this model, the organisation has impacted 29,715 girls to date and made a substantial difference in their lives.

The central pillar of this intervention is a Social Mobiliser (SM) – a caring and wise adult who receives extensive training on gender-responsive life skills delivery, and serves as the face of the program on the ground. The SM provides 77 hours of life skills input to girls through a structured, graded, and age-appropriate curriculum. Additionally, she provides 44 hours of group mentoring, including individual mentoring when necessary. She also offers 15 hours of life skills curriculum to parents and caregivers of the girls. 6 hours of focused discussions with school authorities, and 4 hours of discussion time with local governance-level committees. This dedicated input to girls, while strengthening the enabling environment, assists them to exercise their agency at school as well as at household and community levels. It also equips girls to critically reflect on the choices they have, and, importantly, to identify gender-based behaviours and outlook that they have imbibed being a part of society. In this process, they strengthen their self-awareness, social-aware-

ness, self-efficacy, and voice. Moreover, they are able to envision a life in which education and economic empowerment hold an important place.

Measuring gains in life skills and agency is difficult. In 2016, Room to Read undertook a Randomised Control Trial (RCT) to holistically understand the impact of its programme. The RCT was conducted over a two-year period (2016-2018) in partnership with Abdul Jameel Latif Poverty Lab (JPAL), South Asia, and the United States Department of Labor (USDOL). The RCT concluded that Room to Read's intervention improved school progression and girls' expression of life skills. Another interesting conclusion was that with the support of a mentor and life skills curriculum, girls could stay in school for longer and cultivate leadership skills. The programme made a measurable difference in creative problem-solving, decision-making, relationship building and expressing agency over one's life.

Thereafter, in 2018, Room to Read scaled up their evidence-based programme, through a public-private partnership, to bring life skills education to 67,149 adolescent girls studying in the Kasturba Gandhi Balika Vidyalayas

(KGBVs) of Chhattisgarh, Rajasthan, and Telangana. Room to Read teams worked closely with the respective governments to build systemic capacities through training and information sessions, standardising various aspects of the model, contextualising life skills sessions within government delivery systems, and making the process of implementation cost-effective. This intensive yet 'at scale' work with the residential institutions generated a practical and engaging model for students and educators. The organisation now is working to help the state governments sustain the gains they have made, especially in terms of system readiness and system capacity.

The government collaboration model also inspired district-level governments to roll out life skills education programmes in their own districts, for instance, in Baran, Rajasthan, with over 3,500 Saharaya girl students and their 8,000 other peers from 6 to 12, and in Gadwal, Telangana, with grade 6-8 girl students of all schools in the district. Room to Read is providing technical assistance to the district teams to create system capacity for content creation and facilitation, taking the agency building and gender equality efforts deeper and further. What's been

unique in this intervention is the organisation's emphasis in making the process gender-aware and, ultimately, gender transformational.

Giving life skills education a gender focus, Room to Read is also creating momentum around gender responsive teaching – especially of life skills. Gender responsive teaching recognises and responds to the unique learning needs of students by actively addressing the discrimination or bias they face, based on their gender, that prevents them from fully participating in or benefiting from their education. Gender responsive teacher training capacitates teachers to be more gender aware and equips them with the perspective to understand and respond to gender dynamics in the school.

Room to Read's circle of influence and support is creating a nexus which is deeply rooted and growing organically, enhancing gender equality through gender-focused life skills education and gender-responsive teaching. The model put in place under the inspired leadership of Sourav Banerjee and Geetha Murali is scalable and replicable through public-private partnership in the true spirit of Nexus of Good.

Views expressed are personal

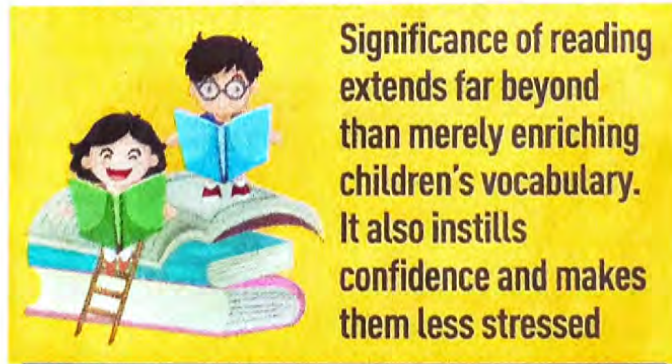


**Cultivating a reading habit from an early age is crucial. With the summer vacation on, we list 5 reasons why reading is important for children**

# DISCOVERING THE MAGIC OF READING

## OUR CORRESPONDENT

**W**hen was the last time you saw a child engrossed in a book while travelling? Well, gone are the days when comics and story-books were the best companions for teenagers during summer vacations. Today, books have mostly been replaced by tablets, laptops, and mobile phones. There are high chances you will find teenagers immersed in their favourite game or watching their preferred show on digital media platforms. Digital media has not only changed book purchasing habits but also the ways we read. In fact, research published by the American Psychological Association mentioned how less than 20 percent of US teens report reading a book, magazine or newspaper daily for pleasure while an overwhelming 80 percent use social media every day. But the significance of reading extends far beyond than merely enriching children's vocabulary. It also instills confidence and makes them less stressed. Cultivating a reading habit from an early age is crucial. With the summer vacation on, here are five reasons why reading is



important for children:

**Improves concentration:** Regular reading can help children to improve their concentration capabilities and also inculcate the habit to sit and listen for extended periods. This habit will come in very handy in their daily school activities.

**Expands vocabulary:** Do you have difficulties remembering the right word at the right time? Well, in the case of a regular reading, this is less. Reading is a great habit to pick up new words and develop a better understanding of the language. Time and again, studies have shown how reading improves vocabulary. Also, reading expands a student's existing vocabulary as they encounter familiar words being used in dif-

ferent contexts. This deepens their knowledge and understanding of the language.

**Intellectual and academic growth:** Books are a treasure trove of knowledge on diverse topics and concepts. Reading will enhance problem-solving skills, enhance critical thinking skills and foster a thirst for learning. Also, regular reading cultivates curiosity, which will enhance academic performance. Reports show that students who have a habit of reading regularly have better analytical and critical thinking skills.

**Promotes mental well-being:** According to a 2009 study by the University of Sussex, reading for just six minutes can reduce tension levels by up to 68 percent. Reading acts as a

therapy and thus helps to deal with feelings of loneliness, anxiety and depression. A study suggested that senior citizens who devote time to reading regularly were 2.5 times less likely to get Alzheimer's.

**Enhances imagination:** How many of us, engrossed in the pages of Bibhutibhusan Bandyopadhyay's cult adventure book *Chander Pahar*, have not yearned to be whisked away to Africa alongside Shankar in his quest for the unknown? That's the power of reading. Books compel you to think, and imagine, thus transporting us to another world. Imagination, on the other hand, helps kids understand empathy and emotions. They learn to relate to others and understand different perspectives.

With the evolution of technology and now with AI gaining momentum, it's important that students strike a balance between screen time and reading. Encouraging children to read from an early age and providing them with a variety of books can foster a lifelong love for reading and help them become confident and well rounded individuals.

# Need to promote Indian science



BIJU DHARMAPALAN

We must develop a science-policy engagement forum to popularise the breakthroughs in Indian labs

Many times scientific community and politicians come to crossroads while promoting scientific discoveries. Even though every research lab managed by central, state and private organizations does ground-breaking discoveries, very few get public attention. Why is it so? Every scientific research will have an output that is bound to affect the common man's life. But the public is carried away by news value research like the space-related ones that get media attention. There are many labs where scientists toil their life to find cures for various diseases, develop high-yielding plant varieties, find solutions to conserve the ecosystem, make our daily life easier by developing various technologies for infrastructure and communication, etc. But unfortunately, poor scientists, though gets acceptance from their peer group, don't find acceptance from the common man.

Even when our spending on R&D has tripled in the last 10 years, members of the scientific community and the public often complain about the lack of budgetary allocation



for scientific research. Even after 75 years of experience, we don't have confidence in our researchers. We still provide more value to people having overseas experience or publications in foreign journals for job selection. If India has to become the global leader in science our policymakers should value the scientific contribution made by the candidate in the Indian laboratories. Only these people can understand the issues affecting our society and find remedies for them. Only when scientific discoveries reach the poorest of society science will get respect and attention. Here comes the need to develop a science-policy engagement forum through which our scientific community, policymakers and citizen-science groups can frequently interact.

Science policy engagement refers to the active involvement of scientists and researchers in shaping and influencing policy decisions at various levels, including local, national, and international. By engaging with policymakers, political leaders, administrators and diplomats, scientists can contribute their expertise, scientific evidence, and insights to inform policy development and decision-making processes. Scientists should communicate scientific concepts, evidence, and findings to policymakers in a manner that is accessible, concise, and relevant to their policy concerns using language that policymakers can understand.

They should present scientific information in a format that is easy to comprehend, such as infographics, policy briefs, or executive summaries. Similarly, they should engage with a range of stakeholders, including NGOs, industry representatives, community groups, and advocacy organizations. Even people from industries should also be made part of this. Many times scientific discovery become popular only

after the product reaches society. Collaborating with diverse stakeholders can help build coalitions, broaden the impact of engagement efforts, and strengthen the legitimacy of policy recommendations. They enable scientists to communicate their research findings, address gaps in their research, and recommendations to policymakers thereby highlighting their research findings at the global level. Building trust and rapport is crucial for effective engagement.

Science policy engagement is an essential avenue for scientists to contribute their expertise, promote evidence-based decision-making, and shape policies that address societal challenges. By actively engaging with policymakers, scientists can bridge the gap between science and policy, promoting the use of scientific evidence to inform policy choices. These interfaces should operate transparently, ensuring clarity about their purpose and processes. Openness promotes trust and credibility.

(Biju Dharmapalan is a science communicator &

pro/6 columnist)

# School dropout rate is worrying

**T**he high dropout rates in schools in several states, including Karnataka, during 2020-21, as revealed by data from the Ministry of Education, is a matter of concern when the education sector is considered to be recovering from the damage caused by the Covid pandemic. Karnataka, with a dropout rate of 14.6%, is in the company of states like Bihar and Gujarat, which had dropout rates higher than the national average of 12.6%. Bihar had the highest rate at 20.7%, followed by Assam, Meghalaya, Punjab and Andhra Pradesh. Uttar Pradesh also had high dropout rates. The New Education Policy (NEP) has set the goal of achieving 100% Gross Enrolment Rate (GER) in schools by 2030. The continuing high dropout rates in many states will make it difficult to achieve it. Even the national dropout rate of 12.6% is high.

Karnataka has to seriously deal with its high dropout problem. Indications of the high numbers of dropouts and out of school children were already available. The state government told the High Court last year that over a million children were out of schools and Anganwadis in the state. The figures were based on a door-to-door survey done across the state on the directions of the court in response to a 2013 PIL which had sought action to bring back children who have dropped out of schools. That shows that the problem is not of recent origin. There have been other surveys also that showed the high dropout rates. According to other reports last year, the retention level of students was 87% at the elementary level, 78% at the secondary level and a poor 46% at the higher secondary level. This meant that over 50% of the students who joined the first standard did not complete their school education. Earlier this year, there were also reports that 3.7 million students in the state did not make it to the college level as they dropped out at the school or pre-university level.

**Govt must address issue to ensure every child enrolls and completes education**

This is a major challenge for the new government. The previous government was perhaps more interested in changing the syllabus and other controversial issues than in addressing issues like the dropout rate. The reasons, which may even vary from district to district, need to be found out. Poverty, persistence of child labour, spurt in child marriages, the low number of high schools compared to primary and middle schools, poor infrastructure and facilities like toilets and even the difficult syllabus at the high school level have been cited as reasons for the high dropout levels. These need to be addressed and it should be ensured that all children are enrolled in schools and that they complete their education. 22/6/23

# चिकित्सा शिक्षा में परिवर्तन का समय

**चि** कित्सा शिक्षा के क्षेत्र में हाल में दो महत्वपूर्ण नीतिगत बदलाव हुए हैं। पहला, देश भर में यूजी यानी एमबीबीएस प्रवेश के लिए कामन काउंसिलिंग होगी। दूसरा मध्य प्रदेश सरकार ने पीजी कर रहे डाक्टरों के लिए तीन महीने ग्रामीण क्षेत्रों में एक तरह की इंटरशिप को अनिवार्य बना दिया है। दोनों ही निर्णय चिकित्सा शिक्षा को समावेशी बनाने में सहायक होंगे, लेकिन भारत में अभी भी यह क्षेत्र कुछ बड़े निर्णयों के इंतजार में है। बेशक मौजूदा केंद्र सरकार ने चिकित्सा शिक्षा के ढांचे में ऐतिहासिक बदलाव सुनिश्चित किया है, जिसके चलते अब डाक्टरी पेशा अभिजात्य श्रेणी से निकलकर आम भारतीय की पहुंच में आया है, लेकिन जनस्वास्थ्य के मोर्चे पर आज भी देश की आबादी और सार्वजनिक स्वास्थ्य सेवाओं के बीच भरोसे का अपेक्षित रिश्ता विकसित नहीं हो सका है।

देश में एमबीबीएस की सीटों की संख्या पिछले नौ वर्षों में 51,348 से बढ़कर 1,01,043 एवं पीजी सीटों की संख्या 31,185 से बढ़ाकर करीब 65 हजार की जा चुकी है। देश में इस समय 654 मेडिकल कालेज हैं, जो 2014 में 387 ही थे। सरकार एक जिला-एक मेडिकल कालेज की परियोजना पर भी तेजी से काम कर रही है। इस बुनियादी सुधार के बावजूद समग्र रूप में सार्वजनिक क्षेत्र की जनस्वास्थ्य सेवाओं के प्रति आम आदमी का भरोसा कमजोर ही बना हुआ है। राष्ट्रीय परिवार स्वास्थ्य सर्वे की पिछली रिपोर्ट बताती है कि देश के 50 प्रतिशत लोग बीमार होने पर सरकारी अस्पतालों में नहीं जाते। ऐसा इसलिए है, क्योंकि सार्वजनिक अस्पताल विशेषज्ञ चिकित्सकों की भारी कमी से जूझ रहे हैं। बिहार, उत्तर प्रदेश, झारखंड, पंजाब, उत्तराखंड और महाराष्ट्र जैसे राज्यों की स्थिति इस मामले में सबसे खराब है। बिहार में तो 80 प्रतिशत और उत्तर प्रदेश में 75 प्रतिशत लोग अपने इलाज के लिए निजी डाक्टरों या अस्पताल में जाने को विवश हैं।

सवाल यह है कि आखिर सार्वजनिक सेवाओं को जनोन्मुखी कैसे बनाया जाए? इसके लिए सबसे बेहतर तरीका यही है कि विशेषज्ञ चिकित्सकों की उपलब्धता को सार्वजनिक अस्पतालों में बढ़ाया जाए। इसके लिए हमें इंग्लैंड की स्वास्थ्य सेवाओं का अध्ययन करना चाहिए, जहां पीजी की पढ़ाई



डा. अजय खेमरिया



सुधार की प्रतीक्षा करता स्वास्थ्य ढांचा • फाइल

भारत की तरह केवल मेडिकल कालेजों में नहीं होती है। वहां सभी पीजी डाक्टरों को संबंधित स्वास्थ्य केंद्रों पर तैनात किया जाता है और केवल थ्योरी क्लास के लिए मेडिकल कालेज जाना होता है। नतीजतन इंग्लैंड के सरकारी अस्पतालों में हर समय चिकित्सक उपलब्ध रहते हैं। भारत में भी इस प्रयोग को अपनाया जाना चाहिए। देश के सभी मेडिकल कालेजों के पीजी विद्यार्थियों को डिग्री समाप्त होने तक ग्रामीण, कस्बाई या जिला अस्पतालों में पदस्थ किया जा सकता है। इससे सरकारी अस्पतालों में हर समय विशेषज्ञ डाक्टर मिल सकेंगे और पीजी डाक्टरों को भी बेहतर अनुभव हासिल होगा।

ग्रामीण स्वास्थ्य सांख्यिकीय रिपोर्ट, 2022 कहती है कि देश के 6,064 सामुदायिक स्वास्थ्य केंद्र यानी सीएचसी में 83 प्रतिशत सर्जन, 74 प्रतिशत स्त्री रोग विशेषज्ञ, 81.6 शिशु रोग विशेषज्ञ और 79.1 प्रतिशत एमबीबीएस उपलब्ध ही नहीं। 22 नए एम्स सहित केंद्र के अधीन चलने वाले अस्पतालों में भी तीन हजार डाक्टरों एवं 21 हजार पैरामेडिकल स्टाफ की कमी चिंतित करने वाला पक्ष है। हमारे देश में सरकारी अस्पताल आज भी एलोपैथी डाक्टरों को आकर्षित नहीं कर पा रहे हैं,

देश में एकीकृत चिकित्सा पाठ्यक्रम बनने के साथ ही नीट की तर्ज पर एक साथ कालेजों में परीक्षाओं का आयोजन हो

क्योंकि करीब 12 लाख कुल पंजीकृत डाक्टरों में से मात्र 1.5 लाख डाक्टर ही समग्र सरकारी तंत्र का हिस्सा हैं। इसमें भी आधे डाक्टर तो आंध्र प्रदेश, कर्नाटक, महाराष्ट्र और तमिलनाडु में पंजीकृत हैं। इन चार राज्यों में सर्वाधिक निजी मेडिकल कालेज भी हैं। बेहतर होगा कि मेडिकल कालेजों की संख्या हिंदी क्षेत्र में तेजी के साथ बढ़ाई जाए। मध्य प्रदेश सरकार के तीन महीने के पीजी इंटरशिप कार्यक्रम को तीन साल बढ़ाकर नीतिगत रूप से देश भर में सार्वजनिक अस्पतालों के साथ जोड़ा जाना चाहिए। इसके अलावा करीब डेढ़ लाख एमबीबीएस डाक्टर हर साल पीजी डिग्री के लिए नीट की परीक्षा देते हैं, लेकिन इनमें से एक लाख फेल हो जाते हैं। इसके बाद वे फिर परीक्षा की तैयारियों में जुट जाते हैं। लिहाजा उनके कौशल का देश को कोई फायदा नहीं होता। सरकार इन सभी को सार्वजनिक अस्पतालों के साथ जोड़कर अगले चरण में पीजी वेटेज दे सकती है। हाल में केंद्रीय स्वास्थ्य मंत्री ने देश के शीर्ष निजी अस्पतालों के साथ बैठक कर उनसे एमबीबीएस और पीजी की साथ में पढ़ाई कराने का आग्रह किया है। यह भी डाक्टरों की कमी को पूरा करने का एक बेहतर रास्ता हो सकता है।

अभी हर राज्य का अपना मेडिकल परीक्षा तंत्र है और कहीं भी समय पर मेडिकल कालेजों में परीक्षाएं नहीं हो पाती हैं। कुछ राज्यों में तो एक से डेढ़ साल तक सेमेस्टर विलंब से चलते हैं। यह स्थिति भी अंततः देश के लिए नुकसानदेह ही है। ऐसे में अब समय आ गया है कि देश में एकीकृत चिकित्सा पाठ्यक्रम हो और नीट की तर्ज पर एक साथ कालेजों में परीक्षाओं का आयोजन हो, ताकि समय पर डाक्टरों की उपलब्धता सुनिश्चित की जा सके। इस दिशा में एक देश-एक परीक्षा और एक पाठ्यक्रम की नीति को राज्यों के साथ मिलकर अपनाया जाना चाहिए। एक साथ परीक्षा से समय पर नतीजे घोषित होंगे और डाक्टरों की उपलब्धता समाज में सुनिश्चित होगी। अभी पाठ्यक्रम के स्तर पर भी विविधता है। जबकि देश के सभी मेडिकल कालेजों में एकसमान पाठ्यक्रम में पढ़ाई होनी चाहिए। भाषा के स्तर पर स्थानीयता का ध्यान रखा जा सकता है। इससे शिक्षा की गुणवत्ता में भी इजाफा होगा।

(लेखक लोकनीति विश्लेषक है)

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# Educational hub

Chief Minister Himanta Biswa Sarma's assertion about transforming Assam into an educational hub in eastern India is welcome. But the path for the desired transformation will be an arduous one and overcoming the challenges will require a vision backed by sincerity, perseverance and hard work. The overall education system in the State from school to higher education level is plagued by a plethora of ills and removing the constraints calls for sustained focus. As of now hardly any of the State's universities figures among the country's top hundred and that itself indicates where the lacunae lie. As everything begins from scratch, it would also be interesting to know what the government is planning to revamp the public school education system, which is in complete disarray largely because of the lack of attention by it. We also need to ponder why we are not able to produce successful candidates in all-India recruitment examinations, especially the prestigious IAS and allied services. More than loud utterances, a sincere and long-term approach taking into account the ground realities is what we need. Aside from government initiatives, student organisations like the AASU can also think of making meaningful interventions in this regard. In the recently concluded NEET-2022 results, the Ajmal Super 40 students have repeated their brilliant feat once again in the all-India medical entrance examination, with over 240 of its candidates qualifying. Can the government and the AASU think on similar lines?

The Chief Minister has set a rather ambitious goal of propelling 50 per cent of the State's universities into the top hundred varsities of the country. A varsity in order to rank among the best will have to be mindful of achieving excellence on many fronts. A wide gamut of issues such as curricular aspects, teaching-learning and evaluation, research, consultancy and extension, infrastructure and learning resources, student support and progression, governance and leadership, and innovative practices will serve as the basis for assessing an institution's worth as a leader in the academic domain. A reality check makes it clear that college and higher education in the State has miles to go to reach the desired standards of excellence. Education is passing through a period of transition, which demands a greater level of dynamism, professionalism and discipline on the part of those imparting and managing education. If we look at the leading universities of the world, academic excellence together with fundamental research has played a vital role in shaping their hallowed stature. The contrast with our universities is too stark to merit any elaboration. The State government, too, has done precious little for expansion and consolidation of higher education over the decades. In sharp contrast to the transformations taking place in the sphere of higher education worldwide, it has remained largely stagnant with little thrust accorded on bringing in contemporary, professional courses that can keep pace with an increasingly competitive job market as also the much needed innovations in matters of imparting education. Also conspicuous by their absence have been research and collaborative endeavours.

17/6

# Invest in schools to help India's children

**S**ocieties around the world recognise that the future lies in children, but far too many young people don't attain what was envisioned for them. Even in the best-performing countries, including Japan and Finland, around one-fifth of 15-year-olds do not reach minimum proficiency levels in reading, mathematics, and science. Globally, six out of 10 children and adolescents are not achieving minimum proficiency levels in reading and mathematics. For the first time in history, we have more non-learners in schools than out-of-school children worldwide. In India, between 2017 and 2021, average language scores for 5th graders on the national assessment declined, which is indicative of learning disruption due to Covid-19 and warrants a concerted effort. It is imperative that we invest in our children in a

manner that makes them engaged learners and responsible citizens.

The National Education Policy provides a much-needed direction by making universal foundational literacy and numeracy (FLN) in primary schools by 2025 the goal. The tall task ahead of us is to achieve the target for almost 43.7 million children studying in classes 1 to 3, which entails working with two million teachers in almost 1.2 million primary schools. Appropriately, the government launched the National Mission on Foundational Literacy and Numeracy (NIPUN) in 2021. A five-tier (national-state-district-block-school) implementation approach was established, envisaging roles and responsibility with the various stakeholders involved. A lot



Sanjay  
Kumar

of space was provided to states and Union Territories for formulating stage-wise action-plans based on the gaps identified. A natural corollary to NIPUN Bharat was Foundational Learning Study (FLS), a large-scale benchmarking study undertaken by the National Council of Educational Research and Training (NCERT) in March 2022 in which 86,000 Class 3 students from 10,000 schools participated. A policy linking methodology was implemented for the first time to arrive at the benchmarks in literacy and numeracy under FLS. Any mission is unachievable until our foot soldiers (teachers) are provided with appropriate ammunition (capacity building exercises). Quality learning entails well motivated and qualified teachers. For this purpose, Digital Infrastructure for Knowledge Sharing (DIKSHA) and National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA) have been leveraged. The DIKSHA platform contains various resources for continuous professional development of teachers so they can create an age-appropriate environment through play, interactions, stories, art,

craft and music, toys, and games.

Apart from resources for teachers, resources for children in 13 languages were launched by education minister Dharmendra Pradhan in 2022. *Jadui Pitara*, as it's called, includes worksheets, playbooks, puzzles, posters, flash cards, and other materials that embody the local culture, social context and languages, and is intended to arouse interest and meet the varied requirements for students at the foundational stage.

FLN is a critical part in the agenda of the G20 Education Working Group (EdWG). Three EdWG meetings on different themes have been organised and the fourth and final one will be held on ensuring FLN, especially in the context of blended learning. We are aware of the Herculean task ahead but as a nation we cannot fail our children. We need to put all our resources together and tailor our responses accordingly. American philosopher Frederick Douglass once said, "It is easier to build up a child than it is to repair broken men." We firmly believe in this.

Sanjay Kumar is Union school education secretary  
15/6/23 The views expressed are personal

# Why I said, not in my name



PETER RONALD DESOUZA

NCERT's revisions ignore the goals with which textbooks were written. It needs to be called out

IT MAY SEEM like a trivial quarrel between some grumpy professors of Political Science and a recalcitrant NCERT. Ego versus ego. I wish it was so straightforward. We could then roll up our sleeves and sort it out. But, unfortunately, the issue is a lot more complicated. The professors write a letter saying they want their names withdrawn from the Textbook Development Committee (TDC). The NCERT says they cannot accept this request because NCERT possesses the copyright. The professors insist, arguing that possessing copyright does not entitle the NCERT to make substantial changes to scholarly texts. The NCERT demurs. They call it "rationalisation". The chief advisors call it "mutilation".

I asked for my name to be withdrawn from the TDC because I saw the NCERT's behaviour, not just its obstinacy, as having serious implications for our working as a constitutional democracy. Such an attitude needed to be called out.

Important issues are involved, such as the place and role of textbooks in nation-making, the process to be followed when producing them, the pedagogic strategy to be adopted, the significance of autonomous knowledge-producing institutions in a democratic society, the qualities of their institutional leadership, the disconnect of the NCERT from its original mission and vision, the relationship between government and the NCERT, and, of course, underlying it all, the big issue of the balance between ideology and truth. The NCERT's actions, it became clear to me, cavalierly disregarded these concerns. I hence needed to dissociate my name from the TDC.

In what follows I shall discuss only three of the above aspects: One, the objectives of the textbooks and the pedagogic strategy developed to achieve them; two, the process of revision to be followed so that the original integrity of the textbooks is maintained; three, the place of NCERT-like organisations in our constitutional democracy.

On the invitation of the chief advisors, I joined the TDC because I saw textbook-writing as central to citizenship education in India when seen from the finest Deweyan tradition. Our group of political scientists from dif-

ferent political persuasions and regions of India, by coming together to write textbooks, were signaling a firm commitment to the values of our republic. We chose topics to be studied, discussed their sequencing, identified political events to be highlighted — such as the Emergency, Gujarat riots, Cold War, challenges to democracy. These were carefully chosen after considerable debate. It is the only way to write textbooks.

The NCERT's revisions ignored these goals. For them it was just a contract between the institution and a contributor. It was not a mission of building democratic citizens. A job had to be done and now that it was completed the professors were redundant. On its website, the NCERT announced that the "terms of these Textbook Development Committees (TDCs) have ended since the date of their first publication. However, NCERT acknowledges their academic contribution and only because of this, for the sake of record, publishes names of all Textbook Development Committee (TDC) members in each of its textbooks." Hello, hello. Is that it?

The NCERT also acknowledged that the TDCs "were purely academic in nature". If the process was "purely academic" then who determined the "revisions"? For example, who decided in the Class 10 textbook on Democratic Politics II, to drop Chapter 3 "Democracy and Diversity", or images, 46, 48 and 49, in Chapter 4 on "Gender, Religion and Caste", or the full Chapter 5 titled "Popular struggles and Movements", or, more curiously, the full Chapter 8 titled "Challenges to Democracy"? What were the arguments given for such decisive revisions of images, pages, chapters? Were they done internally by NCERT officials, or by ministry officials, or by external academics, or by politicians? Publish the names of the people who decided these revisions. Let the public know. And these are the revisions in only one textbook.

Allied to this is the second issue: How were the revisions done? Was it by committee in deliberative mode deciding on what should go and what should stay? We followed that method when we wrote the original textbook. There is a certain sanctity to the process of production. The NCERT text-

books are the standard for textbooks produced by commercial publishers and states. Does this matter to the current leadership of the NCERT, are issues of the integrity of the changes central to the process? Or is it just a *chalta hai* institutional culture? What is the logic of this "rationalisation"? A look at the list of "rationalised content" on the NCERT website makes one very sad. How did we get here?

Which brings me to the third reason for my request for withdrawal. The NCERT was set up in 1961, by bringing together seven organisations, such as the Central Institute of Education, the Central Bureau of Textbook Research, the Central Bureau of Educational and Vocational Guidance, the Directorate of Extension Programmes for Secondary Education, the National Institute of Basic Education, the National Fundamental Education Centre, and the National Institute of Audio-Visual Education. It was supposed to assume the functions of these seven organisations, and more. Set up under The Societies Act, which means it has its own Governing Body (GB) and budget, it is supposed to be "autonomous". The NCERT is not a department of government. Government only selects the director and has its nominees on the GB. The decision of "rationalisation" shows either that the NCERT does not value its autonomy or its leadership does not understand its place in a democracy. For the NCERT's sake, and other similar knowledge-producing bodies, we must call out this damaging behaviour. The political science textbooks were a small opportunity to do so. India deserves better.

Just a footnote: It is ironic that the NCERT has chosen the word "rationalisation" to describe what it is doing. The word has two meanings. The first refers to actions that are logical, systematic, consistent, coherent, reasoned. The second refers to post facto justification for irrational choices and actions that are made. NCERT intends the first. It has, unfortunately, performed the second.

The writer is an independent scholar. He was the Director of the Indian Institute of Advanced Study, Shimla

3/17/17

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# English a catalyst in global employability



RATNESH JHA

Job seekers need to be armed with marketable language capabilities and essential soft skills for a globally hyper-connected work forum



English proficiency also plays a pivotal role in career advancement. It provides individuals with the confidence and ability to present their ideas persuasively, participate in meetings and negotiations and demonstrate leadership qualities. Additionally, English fluency enhances critical thinking and problem-solving skills, enabling professionals to navigate complex challenges.

**Aligns International Workbenches**

English is imperative to align international workbenches because it is the most widely spoken language. It is the language of international business, science and technology. As a result, it is the language of choice for communication and collaboration between people from different countries.

Consolidating the argument, 'English at Work: Global Analysis of Language Skills in the Workplace' reported in 2016 that 64% of employers in India offer better packages to applicants with quality English communication skills.

In addition, English proficiency serves as a gateway to valuable skilling resources. Many educational programs, online courses and professional certifications are offered in English, providing individuals access to cutting-edge knowledge and skill development opportunities.

**Soft Skills and Technical Know-How**

English has been globally proven and accepted as a compulsory skill of this century and potentially of many industrial evolutions to come. Hence, augmenting learners at the university level with English language acquisition abilities is a crucial step to engendering a professional paradigm with job-ready individuals.

Although, the lingering gap is a matter of deep review. As far as adult education is concerned, higher educational institutes may

need a profound re-analysis of new-age industry needs.

Another pertinent method to forge equity in the working tier of India is for multinational corporations to equip their employees with sharp English language skills by adopting Learning & Development interventions. Technology and digital innovations can lead to personalised, scalable, and well-targeted results to accomplish the same.

**Better English, Better Business**

English is a global catalyst of business acumen and personal success. A pre-requisite for high-end employment, English is declared as the official language of communication by many corporations. Multinationals are vibrant spaces with linguistic, cultural, economic, political and social diversity. The professional population needs to be armed with marketable English language capabilities and essential soft skills to qualify for a globally hyper-connected work forum.

(The writer is CEO of Burlington Group of Companies, Asia Pacific)

English has evolved from a global language to a critical 21st century skill. Proficiency in English opens doors to countless opportunities, empowering individuals to compete, access international education, and thrive in the knowledge-based global job market. Fluency in English is now a prerequisite for many positions. Mastering this language has become a necessity in today's interconnected world. This is evident by the findings of the Michael & Susan Dell Foundation and consulting firm Sattva's report, which states that English proficiency is a 'must have' for 73 per cent of job roles.

**Sustainable Employment and Career Advancement**

Proficiency in English unlocks a multitude of benefits. It enables individuals to communicate effectively with colleagues, clients and stakeholders from different cultural and linguistic backgrounds, fostering collaboration and expanding business horizons. Moreover, English proficiency empowers professionals to access global resources.

# POWER TO PONDER

Few things are more damaging than rote learning. It does not expand the learner's universe or inspire the child's imagination. But this has become the predominant system in school education, teaching few students to think independently and creatively. At such a time, the decision of the Council for the Indian School Certificate Examination to increase the number of critical or analytical questions and to emphasise the application of concepts for purposes of deeper understanding is more than

welcome. Although the council's long-term plan is to change, gradually, some questions into analytical ones from middle school onwards, schools are planning to train children in this new approach from the lower classes. This would require a reorientation for students, teachers and guardians in different ways.

Critical thinking would be the best preparation for higher studies as well as for competence in different kinds of work. Conceptual clarity through application would be linked to the children's experiences; there are few better ways to encourage life skills and creativity.

The plan is a reason for hope when independent thinking seems on the wane. It is not the attacks on certain opinions or analyses that is at issue here, or the silencing of dissent and the eager echoing of dominant points of view. The power to think and question, to explore and experiment, itself has been undermined through the practice of rote learning. Tutorial homes flourish in this situation, exacerbating the evil of thoughtless regurgitation. It is

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An examination board is planning to introduce questions to train students in critical thinking at a time when it is on the wane

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a vicious cycle — the examination system, teaching practices, the perceived indispensability of coaching all turn one upon the other. First-generation learners may need the extra help, and that, too, should be provided by the school. But unless teachers have security, respect, teacher-like responsibilities — not counting midday meal eggs, for example — and acceptable work environments, reasonable solutions will remain elusive. For better-off families, ambitions for the children and aspirations for better lives drive the cycle, af-

fecting not just the quality of education but the culture that emanates from it.

How the plan is implemented would be crucial. The CISCE has professed its adherence to the National Education Policy 2020 in making the decision; experience indicates that the way the NEP's promises are fulfilled is

often rather different from what the promises seem on paper. There has been a dumbing down of culture not just because of fear but also — at least partly — because of flaws and growing inequalities in the education system. Any sign of sharpness — of thinking, analysing, arguing, dissenting, even laughing — is bluntly attacked, which is predictable for a regime that bulldozes through its decisions in a democratic Parliament. Education must be regimented as bluntly, not just in method but also in content, by distortions in history and science to suit the ideology of the present government. Dullness is all. A change in approach in school-teaching could rescue a whole generation — if it happens the way it has been promised.

## ऐतिहासिक धरोहर

एक सदी से अधिक हो गया हवेली जुमा दिखती इस इमारत को शिक्षा की इमारत लिखते हुए। महिला शिक्षा के लिए यहां उस समय ती प्रचलित की गई जब सती प्रथा अपने चरम पर थी। दिल्ली अंग्रेजों से जुड़ रही थी। स्वाधीनता के तराने छेड़े जा रहे थे। उसी दौर में यहां पढ़ने वाली बेटियों ने भी गुलामी की बेटियों को तोड़ने की लाली और महिला शिक्षा के दीपक से जग को प्रकाश दिया। हाल ही में 119 वरस पूरे करने वाले ऐतिहासिक स्कूल इंदुप्रस्थ कन्या शिक्षालय के बारे में बता रहे हैं नैमिष हेमंत...



दिखती हवेली है, 119 वरस पहले स्कूल के लिए दान में मिली। आज भी देखकर लगता है बेटियों की शिक्षा के साथ, इमारत भी शिक्षा के प्रभाव में मजबूती में निरवरोधी जा रही है।

# शिक्षा की लौ ने फैलाया स्वाधीनता का प्रकाश

राधोनीता का वह दौर था जब गुलामी की बेटियों को तोड़ने की छटपटाहट हर ओर देखी जा रही थी। उस दौर में पुरानी दिल्ली में महिलाओं की आजादी को लेकर तमाम कुरीतियां हावी थीं। लड़कियों का विवाह छोटी उम्र में हो कर दिया जाता था। पढ़ा प्रथा के साथ सती प्रथा भी जोड़ी पर थी। ऐसे में उन्हें शिक्षा के लिए स्कूल भेजने की बात सोचना भी बेमानी थी। तब इस विद्यालय ने समाज को बेटियों को तोड़ते हुए लड़कियों की शिक्षा का ऐसा बोधा उठाया, जिसने तब दिल्ली में जात बालक राष्ट्रीय स्तर पर गहरी सामाजिक छाप छोड़ी थी। इंग्लिश, नोबेल पुरस्कार विजेता दार्शनिक व कावि गुरु रवींद्रनाथ ठाकुर जब 24 अक्टूबर 1914 को इस विद्यालय में आए तो उन्होंने कहा 'इस स्कूल की मेरी यात्रा के दौरान यहां अपनाई जा रही शिक्षा पद्धति और तरीकों के साथ तो यहां के लड़कों की लगन और समर्पण ने मुझे अंदर तक प्रभावित किया है।' कुछ ऐसे ही विचार यहां आकर रखने वाली में कोमलाल नेहरू, बाल गंगाधर तिलक, डा एनी बेसेंट, राजकमल नयदू, अरुणा आसफ अली, धनश्याम दास बिष्टावत व इंदुप्रस्थ गुलजारी जैसे विशिष्ट लोगों भी थे। यहां से पढ़ने वाली छात्राओं ने देश की पहली महिला प्रमुखता, सरदार कालिका, गणेशी जयराव रावते बाकासीवाल भी रही। वह छात्राओं की ही समय समय पर राज्य व राष्ट्रीय प्रमुखता मिली है।

स्थापना के 119 वर्ष पूरे किए। पिछले शैक्षणिक वर्ष 588 छात्राओं ने शिक्षा ग्रहण की। उन्हें जीव विज्ञान, रसायन विज्ञान व भौतिक विज्ञान के साथ ही वाणिज्य, अर्थशास्त्र, इतिहास, भूगोल, कंप्यूटर, कला समेत अन्य विषयों की शिक्षा दी जाती है। शिक्षा के लक्ष्य के साथ वृत्तंद हो रही इमारत : एक सदी से अधिक का समय बीतने के बाद भी इस स्कूल की इमारत भी मानों अपने लक्ष्य के साथ और मजबूत होती गई। तीन मंजिला यह इमारत लाल बलुआ पत्थर, चूने के प्लास्टर और ईंटों से बनी है। इसमें दो आंगन हैं। यह इमारत अपने नुकीले मेहराबों, पत्थर के प्रवेश द्वारों और कोष्ठकों, भव्य खंभों और खिड़कियों पर रंगीन शीशे व नक्काशीदार छज्जों के साथ उस दौर की इमारतों की भव्यता को जीवंत करती है। इमारत को वर्ष 1995 में दिल्ली विकास प्राधिकरण (डीडीए) द्वारा शहरी विरासत पुरस्कार से भी पुरस्कृत किया गया। वर्तमान में यह विद्यालय इंदुप्रस्थ स्कूल एजुकेशन एंड वेलफेयर सोसायटी द्वारा संचालित है। दरअसल, यह एक हवेली है जिसे भजन भवन के नाम से जाना जाता था, इसे दिल्ली थियोसॉफिकल सोसायटी के सदस्य रहे राय बहादुर बालकिशन दास द्वारा दान किया गया था। इसकी स्थापना में स्वतंत्रता संग्राम सेनानों व शिक्षाविद डा एनी बेसेंट का बड़ा योगदान है। उन्होंने थियोसॉफिकल समाज के उस समय के प्रबुद्ध व प्रतिशाल सदस्यों को देश में महिला शिक्षा को बढ़ावा देने का आग्रह करते हुए पत्र लिखा था, ताकि शिक्षा के जरिए महिलाओं को समाज में बराबरी पर लाया जा सके और कुरीतियों पर रोक हो।

तब ब्रिटिश फर्म दिल्ली ट्रामवे बिजली आपूर्ति कर्पन में वीरेश्वर कांकराओ अधिकांश लाला गुगल किशोर ने सिफ सात लड़कियों के साथ इस स्कूल की शुरुआत की थी। उस काल के धनदायक व प्रबुद्ध लोग राय प्यार लाल एडवोकेट

राय बहादुर लाला सुल्तान सिंह, सेठ बनवारी लाल लोहिया, राय बहादुर लाला प्यार लाल और राय विरांभर नाथ का भी इसमें सहयोग मिला। इसके लिए ये लोग छिपीबाड़ा के साथ ही जामा मस्जिद के आस-पास के घरों में गए और लोगों को अपनी लड़कियों को स्कूल भेजने के लिए मनवाया।

अंग्रेजी के लिए शुरू की थी विशेष वतास : स्कूल की उप प्रधानाचार्य नीलम जैन बताती हैं कि तब लड़कियों को घरों से निकालकर स्कूल तक लाना आसान नहीं था। तब इसके लिए काले कपड़े से ढकी वगियों का इस्तेमाल किया जाता था। लड़कियां साड़ी पहनकर इन वगियों से स्कूल आती थीं। शिक्षा के लिए उम्र की भी कोई बाधता नहीं थी। दरअसल, उस वकत यह सिर्फ एक हवेली नहीं, बल्कि दिल्ली में हिंदुओं के बीच महिला शिक्षा के ईर्द-गिर्द एक संपूर्ण नारावादी आंदोलन था। स्थापना काल में हिंदू ही छात्राएं थीं। कुछ वर्ष बाद वहीं, वर्ष 1906 तक ईसाई, मुस्लिम और जैन समुदायों की छात्राएं भी आने लगीं। वर्ष 1915 तक स्कूल में कई लड़कियों ने अंग्रेजी पढ़ने की इच्छा व्यक्त की। उसके लिए कक्षाएं शुरू कराई गईं। स्कूल के नाम पर सिक्का भी जारी हो चुका है।

दो छात्रा दो कमरों के साथ आइपी कातेज भी वहीं शुरू हुआ। वर्ष 1915 में यह हाई स्कूल हुआ और वर्ष 1924 में इंटरमीडिएट कॉलेज तक पहुंचा। उसा वर्ष इसके ऊपरी मंजिल के दो कमरों और दो छात्राओं के साथ इंदुप्रस्थ (आईपी) कॉलेज शुरू हुआ। हालांकि बाद में आइपी कॉलेज में छात्रों का संख्या बढ़ती गई तब अलग छात्राओं की बढ़ती संख्या को समायोजित करने के लिए बाहर बनाया गया इंदुप्रस्थ हिंदू गर्ल्स स्कूल की पहली प्रधानाचार्य



आस्ट्रेलिया में आई थियोसॉफिकल समाज के सदस्य जो मोनर थी एनी बेसेंट के अग्रज थे। 1904 में इस विद्यालय में जुड़ी थी। बाद में वह इंदुप्रस्थ कन्याओं की प्रधानाचार्य बनीं। उन्होंने गुरु समर्पण राय व शिक्षा के कारगर बनने वाले भावदह स्वाध्याय किए। इसा वर्ष इस स्कूल को कई अन्य विशेष पुरस्कार के लिए भी नामांकित है। वर्ष 1911 में दिल्ली में लड़कियों के शिक्षा का प्रभाव बनाने वाला यह पहला विद्यालय था। इसी तरह वर्ष 1915 में राजधानी में वाणिज्यशास्त्र की शिक्षा के साथ विद्यालय की कक्षाओं का प्रकाश फैल भी वहीं शुरू हुआ था। अब छात्राओं इस विद्यालय की एक बड़ी ही जीविक बल चुकी है। उस था वह पुराना दिल्ली का छात्राओं के जीवन में प्रकाश फैला है।

17/6/2023

# Leverage the IIT overseas network

Indian Institute of Talent?", a middle-aged American once asked me when I told him that I graduated a long time back from one of the Indian Institutes of Technology (IIT). To be honest, that characterisation may not be too incorrect, given that IITs have now been established as a leading pipeline for global CEOs, academics, policy gurus, and entrepreneurs.

There has also been a long-standing debate in both Indian policy circles and at casual luncheons on whether IITs serve their purpose for India, or whether they are merely a large sieve for Indian talent, facilitating brain drain. In a new article, forthcoming in the *Journal of Development Economics*, my coauthors Ina Ganguli, Patrick Gaulé, and I track career histories for the batch of 2010 IIT applicants and find that 36% of the top 1,000 rank holders migrated to the West. The migration rate rises to 62% for the top 100 rank holders. Students who attended one of the five most prestigious IITs (i.e. Bombay, Delhi, Kanpur, Kharagpur, and Madras) are four percentage points more likely to migrate than equally high-scoring students who attended other universities, on average. The effects are mainly driven by students migrating for higher education, rather than for seeking employment.

However, brain drain is only part of the story. We have ample research that shows how the diaspora and return migrants helped grow the Indian knowledge economy. My own research, conducted around a decade ago, demonstrates how a group

of 12 return migrants — Indians who spent long careers at Microsoft's Redmond campus in the United States — were instrumental in setting up the Microsoft R&D centres in Hyderabad and Bengaluru. Over time, the collective efforts of a handful of returnees created opportunities for hundreds of Indian engineers and drew some of the best global minds to India. I met Kentaro Toyama, a brilliant computer scientist from Yale University,

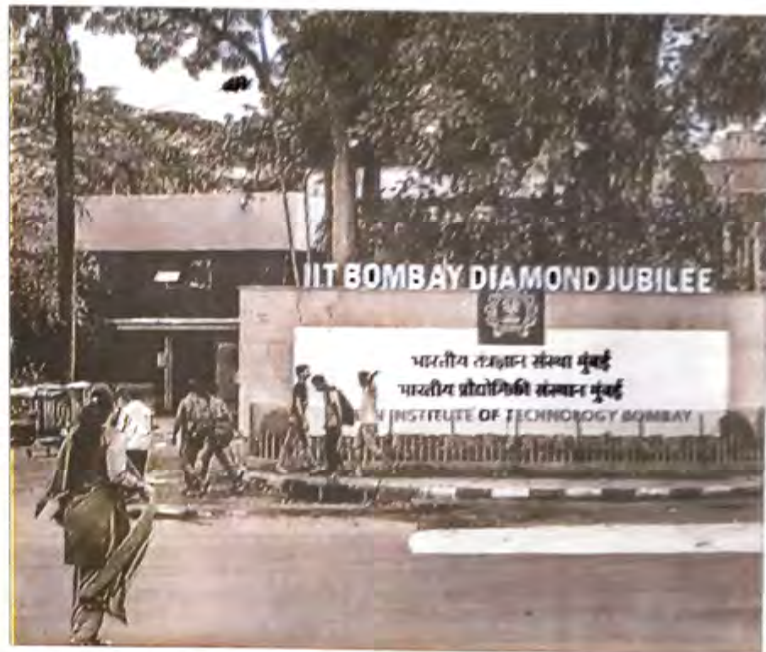


Prithwiraj Choudhury

who was working with Microsoft Bengaluru. Kentaro travelled to Indian villages, observed how village schools lacked computers; and helped develop the multipoint mouse, a device that allowed more than one child to share a computer screen. In other work, Ramana Nanda and Tarun Khanna showed how ties with the diaspora benefited

Indian entrepreneurs, especially entrepreneurs living in cities with weaker formal institutions.

Further developing diasporic ties and facilitating the return migration of talented graduates from elite institutions such as the IITs should continue to be key policy priorities. After the pandemic, knowledge workers have greater flexibility around where they can live. While companies such as GitLab and Airbnb allow employees to live anywhere around the world, other companies such as Google, Mastercard, and American Express allow workers to work from anywhere for a few weeks every year. These organisational changes create new opportunities for return migration and building ties



Students who attended one of the five most prestigious IITs (i.e. Bombay, Delhi, Kanpur, Kharagpur, and Madras) are more likely to migrate

with the diaspora. Even short periods of being together can facilitate connections that last for a long time. Startup Chile, which offered short duration visas to talented foreign entrepreneurs, is a case in point. The connections fostered between the foreign entrepreneurs and local talent remained strong, long after the entrepreneurs had left Chile. In a similar way, talented IITians could contribute to the Indian economy, even if they only spend brief periods of time visiting India, as long as they are using these visits to develop and broaden their local connections.

This brings me to my final point. A concrete idea to make this happen is to leverage the IIT reunion events. Unlike elite western universities, which organise

highly programmed reunions every five to ten years, IITs have organised reunion batches that graduated five, 10, 25, 50, and even 75 years earlier. The organisation of IIT reunion events leaves much to be desired. These should be held with greater frequency and can be used to reconnect alumni with researchers, current students, and local entrepreneurs. Alumni could then serve as mentors, investors, and partners in knowledge-creating efforts. IITs should not be thought of as the great brain drain sieve. Rather, imagine them as a platform facilitating brain circulation.

Prithwiraj Choudhury is a Senior Lecturer, Associate Professor, Harvard Business School, and a senior research advisor at the Center for Global Development.

# Piecemeal approach?

*Despite explicit focus and tit bit measures, unemployment, as an intractable problem, persisted through the plan periods without any directional improvement; the focus should have been on devising an overarching employment policy*



KRISHNA GUPTA

In the last article, we discussed the conceptual issues regarding unemployment, such as the data sources, types and measurements of unemployment, and how the issue was addressed in the first six five-year plans. In this article, we will take up the discussions in the next six plans, beginning with the seventh plan.

## Unemployment during 7th-8th plans

The seventh plan (1985-90) admitted that economic growth alone would not lead to 'trickle down' of the benefits, and specific and targeted programmes for employment generation were necessary. The plan also stated that there was no need to be skeptical of the latest technology, and that this should be accepted: what needed to be done was adapting, training and retraining so that no jobs were lost. The plan also gave equal importance to wage and self-employment schemes. As per the 38<sup>th</sup> round of NSS, the backlog of unemployment (for the 5+ age group) at the beginning of the seventh plan was estimated at 9.2 million, and another 39.38 million would join the labour force during the plan. Hence, the required employment generation during the plan was 48.58 million. It was expected that 40.36 million jobs would be generated through various schemes like NREP, RLEGP and IRDP. These would arise mainly in agriculture, irrigation, small-scale industries, housing, transport and the rural non-farm sector.

The eighth plan (1992-97) was implemented even as the massive economic reforms were unfolding and liberalisation was under way. The strategy adopted in the eighth plan was to treat employment and economic growth together, and to focus not only on creating jobs but also to raise productivity of existing employment. In the context of the economic reforms, the impact of various macro-economic and labour policies on employment would have to be kept in mind: in particular, the credit policy would have to be more employment friendly. In terms of numbers of unemployed, there was an increase over the earlier plan. The backlog of unemployment at the beginning of the eighth plan was about 23 million, as per the plan document. With an addition of 36 million in

the labour force during the plan period (1992-97), the number of jobs required would be 59 million. Another 36 million would be added during 1997-2002, making the number of jobs required over the ten-year period 1992-2002 to be 94 million. This translates to an employment growth of 4 per cent per annum if the goal of providing employment to all is to be achieved by the end of the eighth plan, and around 3 per cent per annum if it is to be attained by 2000 AD. The sectors where these jobs were to be generated are: agriculture, through increasing land and labour productivity (more irrigation, more cropping intensity etc.); animal husbandry; and land and forests in the agriculture and allied sectors. Other sectors where jobs would have to be found are the rural non-farm sector, large and heavy industry, medium and small-scale industry, transport and communications.

In the ninth plan (1997-2002), it was recognised that a bulk of the labour force had low education levels, and the focus was on the growth of sectors which could provide maximum employment to such people. At the same time, there was a need to raise the education and skill levels of the workforce. The plan document also admitted that the problem of providing jobs was proving undaunted because of the rise in the labour force on the one hand and "a secular downward pressure on the employment intensity of the growth processes". Based on the labour force participation rates, it was estimated that the labour force would rise by 52 million in the ninth plan (this was a revision from the earlier projections of this period in the eighth plan), 58 million in the tenth plan and 55 million in the eleventh plan. The ninth plan also estimated that 416.2 million jobs would be generated during the plan, which would bring down the unemployment rate to 1.66 per cent from the 1.89 per cent of the eighth plan, and would fall further to 0.86 per cent in the tenth plan. The ninth plan also underlined two important issues related to unemployment: the need to raise the education and skill levels, particularly in the agriculture and allied sectors, and the need for providing security of employment to casual workers.

In the tenth plan (2002-07), unemployment was recognised as one of the foremost problems. The document estimated the addition to the labour force in the tenth plan at 45 million, and the backlog at the beginning of the tenth plan was also about 45 million. Thus, 70 million jobs needed to be generated during the tenth plan. However, assuming

an 8 per cent growth rate, only 30 million jobs were possible to be generated, which would leave the unemployment rate (number of persons unemployed per 100 persons) at 9.79 per cent at the end of the plan, which would be higher than the 9.21 per cent at the beginning of the plan. It was suggested that additional jobs could be generated with some modifications in strategy, and that additional jobs would come from agriculture and animal husbandry, small and medium enterprises, rural non-farm sector and social sectors like education and health. As it turned out, as per the 61<sup>st</sup> round of NSS for 2004-05, employment growth in the tenth plan improved over the previous period. During 1999-2000 to 2004-05, about 47 million work opportunities were created as compared to only 24 million in the previous period 1993-94 to 1999-2000. During this period, the government set up the Montek Singh Ahluwalia task force on employment opportunities in 2001.

The report was sharply criticised because it failed to outline a workable strategy to achieve the target of 100 million jobs in the next year, set by the then prime minister.

It relied predominantly on the private sector involvement in agriculture and industry to generate these jobs. A special group for the same job was set up under the noted economist SP Gupta in September 2001, which found that jobs had fallen in the 1990s, and that the organised sector's ability to generate jobs had come down to zero due to rising capital intensity and policies like 'rightsizing'. The special group suggested that the focus should shift to the unorganised sector, where labour-intensity is higher. In the organised sector, only finance, education and health had positive employment elasticities.

The eleventh plan (2007-2012) document noted that while total employment rose in the tenth plan, the labour force grew even faster, which raised the unemployment rate. The backlog at the beginning of the eleventh plan was estimated at about 35 million, and with another 45 million addition to the labour force (this was revised down from the 52 million in the Approach Paper to the eleventh plan), total job requirements were 87 million. However, the Approach Paper called for the creation of 70 million jobs, which the plan document later corrected and suggested that 58 million jobs would be created. It was estimated that jobs in agriculture would actually fall and the additional jobs would come from manufacturing, construction, transport & communications

and services such as IT, tourism, healthcare, education, banking, insurance, retail and media. As it turned out, the rate of unemployment declined from 8.3 per cent in 2004-05 to 6.6 per cent in 2009-10, and in this respect, the eleventh plan was a success.

The twelfth plan (2012-17), again emphasised the need for faster inclusive growth so that poverty and unemployment could be addressed. It set a goal of 50 million additional jobs and skill training and certification of another 50 million people through various institutions such as Industrial Training Institutes (ITIs). Export of products of employment-intensive industries was also suggested as a measure to generate additional jobs. The Approach Paper to the twelfth plan laid a strong emphasis on skill development, and suggested a sharp increase in jobs in manufacturing so that the surplus labour expected from the rural and agricultural sectors could also be absorbed. This would require a step up in skill development and simplifying regulatory measures in areas of labour, industrial disputes and social security of organised and unorganised sector workers. Employment-generating sectors identified in the twelfth plan were: textiles and garments, leather and footwear, gems and jewellery, food processing industries, handlooms and handicrafts.

## Conclusion

Unemployment has been an immense challenge and intractable problem through the plan years. Not only have there been conceptual and statistical problems, the targets in various plans have been largely artificial and unachievable. In terms of better statistics, the Periodic Labour Force Survey (PLFS) has begun from April 2017, which gives an update on urban unemployment every three months and rural and urban unemployment every year. There has also been a renewed emphasis on skill development in the last few years, which is expected to provide additional jobs and raise labour productivity. In the rural areas, the wage employment scheme, Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) continues to be an important source of employment. All in all, many correct bits and pieces have been put in place, but there is a lack of an overarching employment policy or strategy. Admittedly, the problem is complex, with many moving parts, from the regulatory framework to sectoral policies to the overall macroeconomic framework. So, the answer also has to be multi-talented.

The writer is Aditi Chel Secretary, Dept of Mass Extension, Education and Library Services, Govt of West Bengal.  
m4/18/9

There has been a renewed emphasis on skill development in the last few years

# Sam Altman isn't totally wrong. Five reasons why India lags in innovation



CHETAN BHAGAT

We Indians do claim to have a lot of pride in ourselves, but it doesn't take a lot for us to feel hurt. During his recent India visit, Sam Altman, co-founder of OpenAI that developed ChatGPT, was asked about the possibility of an Indian startup creating its own foundational artificial intelligence platform with, say, a small capital backing in the range of \$10 million. Sam replied: "We will explicitly tell you that it's completely hopeless to challenge us in training foundational models, and you shouldn't even attempt it. However, it is your responsibility to still make the attempt, and I genuinely hold both of these perspectives. I genuinely believe that the chances of success are quite slim."

Various tech company CEOs and senior em-

ployees flooded Twitter and LinkedIn with posts about how they 'accept this challenge' and will 'show Sam it can be done.'

Sam, on his part, later clarified that his comments were taken out of context, and he meant competing with \$10 million was quite impossible. Back-pedalling or not, his comments did touch a raw nerve. Whatever praises we might sing about our multi-billion dollar software service industry and our nation's entrepreneurs, one thing is seldom admitted — we can't compete on innovation.

This is not to say that Indian companies do not have many positive qualities. They can build strong brands and scale new heights in terms of sales, turnover and share prices. Indian founders and promoters can make it to global rich lists. Indian employees can work harder than anyone else in the world. However, to get even better, we need to admit the hard to accept fact that Sam is kind of right.

Most big Indian companies do offsites and

retreats for their employees where CEOs often make long speeches about innovation. However, if you ask the employees, they will tell you how innovation is discouraged in reality.

To fix this, we need to understand the five reasons why Indian companies are unable to innovate.

**1. India's hierarchical culture:** The beauty of innovation is it can come from anywhere. However, Indian culture is designed around respect and reverence for seniors and elders. Years of experience are seen as more important than new ideas. At home, we don't question our parents. In companies, we don't question the boss. Indian bosses usually have fragile egos and feel terribly insecure if a junior has better ideas. Hence, those ideas are often killed. Juniors over time learn to not think or rock the boat too much. A culture of innovation requires a totally different mindset and setup.

**2. Harping on the past:** It is always about the greatness of our past, our heritage, the wisdom of the old texts, sages and what is passed down the

generations. What this means is it's better just because it is old. Innovation is about the new. If new is bad, how can we become an innovative society?

**3. Lack of scientific thinking:** Indians don't like to be too scientific, and innovation requires a 'question-everything' mindset, which we find too unsettling and dangerous. Invariably, we are sceptical of new science and technology even though we love to enjoy the spoils of it like smartphones and modern medicine. We keep pushing our kids to study science, but only because it helps them get stable jobs as doctors and engineers. There is little interest in becoming a scientifically oriented society as 'our ancient culture had all the wisdom' and 'western science doesn't have all the answers anyway.'

**4. Copy-paste ethos:** Most startup funding goes to companies that are clones of some successful western startup. Many of these copy-paste ventures are successful because of our massive population. We are then content celebrating this as India's arrival on the world scene.

It's no less achievement to replicate an American tech company in India, we tell ourselves. Execution is hard, after all. However, this is not innovation, which means creating totally new, different, creative products or businesses.

**5. Lack of a free society:** We are a free country, but do we allow all kinds of opinions, views and art, even when we disagree with them? Invariably, innovative societies are free societies.

It will require a mindset shift, ego shift, cultural shift and capital allocation shift for the Indian entrepreneurial ecosystem to become known for their innovation. This is a long journey, but the first step is for Indian CEOs and promoters to not feel hurt or be defensive about Sam's comments. Instead, they can actually work to foster and reward innovation. We as Indians too should embrace the future as much as we love the past, and embrace the new as much as we respect the old. Innovation is creation, and it is an essential part of progress.

# Bring effective strategy to attract international students in India

The number of international students in India has actually declined to 48,035, but this could be attributed to the onset of the Covid-19 pandemic that hit local, national and transnational travel adversely impinging on the global mobility of students.

## OPINION

FURQAN QAMAR



sive metropolises, district headquarters, commercial capitals and hubs and large towns of the country. Sadly, however, the experience so far, suggests that the nation has to travel a long distance to get any major presence registered in the global competition to promote and market its higher education to attract a significant number of international students.

The Study in India Programme (SIIP) was launched in 2018 with the specific purpose of attracting international students to India. It has then targeted to increase the number of international students in India to 2 lakh students over a period of five years. The target for the debut year itself was 18,000 additional students.

In 2017-18, the country had 46,146 international students in India. By 2019-20, the number of international students in the country had gone up to 49,348, an addition of 3,202 students over a period of two years. This cannot be said to be more than the usual rate of growth in international students in India.

The number of international students in India has actually declined to 48,035, but this could be attributed to the onset of the Covid-19 pandemic that hit local, national and transnational travel adversely impinging

on the global mobility of students. Sadly, this is not the first time that the targeted increase in international students coming to India has eluded us. The scheme of the Promotion of Indian Higher Education Abroad (PiHEAD) which was launched in 2004, after registering higher than usual increase in the number of international students over the two initial years could not sustain the momentum.

Past experiences notwithstanding, the nation continues to nurture the hope, and rightly so, that India would soon become a potent option for students looking for quality higher education outside their national territories. The National Education Policy (NEP 2020), therefore, seeks to promote India as a global study destination for restoring its role as Vishwa Guru. In pursuance of the policy, guidelines for attracting international students to India are being repeatedly revisited and revised.

These efforts include the notification of revised guidelines by the University Grants Commission (UGC) in 2021. The approaches and guiding principles of attracting international students, however, continue to be based on the assumption that India offers quality higher education at affordable prices to international students but is unable to market itself well. It is also assumed that things would change in favour of India and that it must gear itself to accommodate a very large number of international students in its higher educational institutions.

These assumptions have been proven wrong in the



past and continue to be flawed. Very few higher education institutions offer quality higher education in the country. Their numbers may not even touch a couple of thousands. This is despite the fact that the nation has more than 50,000 higher educational institutions spread across the length and breadth of the country. The fact that Indians account for the second-largest community of students pursuing higher education abroad.

The limited number of high-quality higher education institutions in the country have limited intake capacity and are, thus, highly selective. Only a paltry proportion of applicants are able to get selected for admission in them. International students, particularly, of those nationalities that usually aspire to study in India, find it particularly hard to cross the entry barriers.

The rest of the institutions are not likely to offer quality higher education or take care of international students. Presumably, it is for

these reasons that the Study in India Programme (SIIP) permits just about 125 higher education institutions to be registered on its portal for granting admission to international students.

So is the assumption that India has a major comparative cost advantage to offer higher education at affordable prices to international students. Tuition and other charges by higher education institutions do on an average range between \$2,000 to \$10,000 a year but some of the premier higher education institutions have now started pegging at and benchmarking their fees with the best of the best global higher education institutions. Many Indian Institutes of Management (IIMs) can be cited as the most glaring examples.

Going by the purchasing power parity, the cost of living—food, accommodation, transportation -- in India even in the most expensive locations is indeed much lower than most of the European and North American destinations. But then there is a catch.

The most preferred global destinations of higher education allow international students to work and earn at least 20 hours per week. Additionally, many of them offer tuition waivers or other means of financial support like teaching and research assistantships, on-campus jobs and so on.

These effectually make studying in India more expensive than studying in most of the developed countries in the sense that those who study in India have to pay all education-related expenses out of their own pockets. In contrast, those studying in rich and developed countries are able to finance a predominant share of the cost of their education by earning in those countries themselves.

The potent possibility of getting post-study work visas and pursuing a lucrative career earning foreign currencies serves as icing on the cake.

*Furqan Qamar is a professor at Department of Management Studies, Jamia Millia Islamia, a central University under act of Parliament.*

Most countries of the world nurture the aspiration to become the first choice and the favourite destination for international students. So does India, and quite legitimately so. India can claim to have one of the largest systems of higher education found anywhere in the world. It occupies the first position in the world as far as the number of higher education institutions is concerned. In terms of enrolment, India occupies the second position in the world and is all set to rise to the first position very soon.

Higher education policy planners and regulators believe that India offers quality higher education at the most affordable cost to international students both in terms of tuition and other charges payable to the higher education institutions as well as the cost of living even in the most expen-

# Go Forth, IIT-IIM, But Careful of Your Brands

The IITs and IIMs are India's top-notch higher-education institutions. A seat in either is almost like a podium finish in the Olympics. Their entrance tests are so tough that they have spawned a multi-crore tutorial ecosystem. With blockbuster brand value, recall and reputation, both brands are seeking opportunities to tap the lucrative foreign market. These steps are in line with the National Education Policy (NEP) 2020.

The 'internationalisation of education' plan outlined in it includes three reforms — foreign universities to set up campuses in India, Indian universities to set up campuses abroad, and twinning, dual-degree and joint-degree programmes at Indian universities in collaboration with foreign varsities. African



and Gulf nations, Thailand and Vietnam are among potential destinations for Indian universities for offshore campuses. While IIT Delhi is considering setting up a campus in the UAE, IIT Madras is exploring options in Sri Lanka, Nepal and Tanzania. IIT campuses are also in the pipeline in Egypt, Thailand, Malaysia and Britain.

These go-global plans have been in the works since 2015 and are welcome. But these institutes lack adequate faculty strength, which can upset the new plans. May 2023 GoI data show that over 6,000 faculty posts are vacant at central universities, 4,500 in IITs and 496 in IIMs. While India churns out almost 25,000 PhDs annually and over a million postgraduates, IIMs, IITs and other top institutions fail to find enough qualified candidates to hire, a timely reminder that India's higher education system faces severe quality issues. While going ahead with their plans, IITs and IIMs must factor in this reality, and ensure the brand expansion doesn't end up harming the motherships. *ET/19/10*

Salil Sahadevan

**Y**ou used Google Maps to navigate your way around the town last week. On another occasion, may be, you sketched something on a piece of paper to explain a concept to a friend. These are mental models in action. Just like maps and diagrams organise information visually, mental models do so in your mind. They are simplified representations of how things work.

Unconsciously, we rely on mental models even when choosing what to wear each morning. These cognitive shortcuts significantly shape our daily decision-making. Just imagine how difficult it would be to learn the positions of the sun and other planets without a model of the Solar System. Mental models serve as frameworks that enhance understanding, facilitate comprehension and enable us to grasp new concepts by integrating them with existing knowledge. Evolving from experiences, observations, and learning, mental models come in various forms like diagrams, analogies, or step-by-step methods.

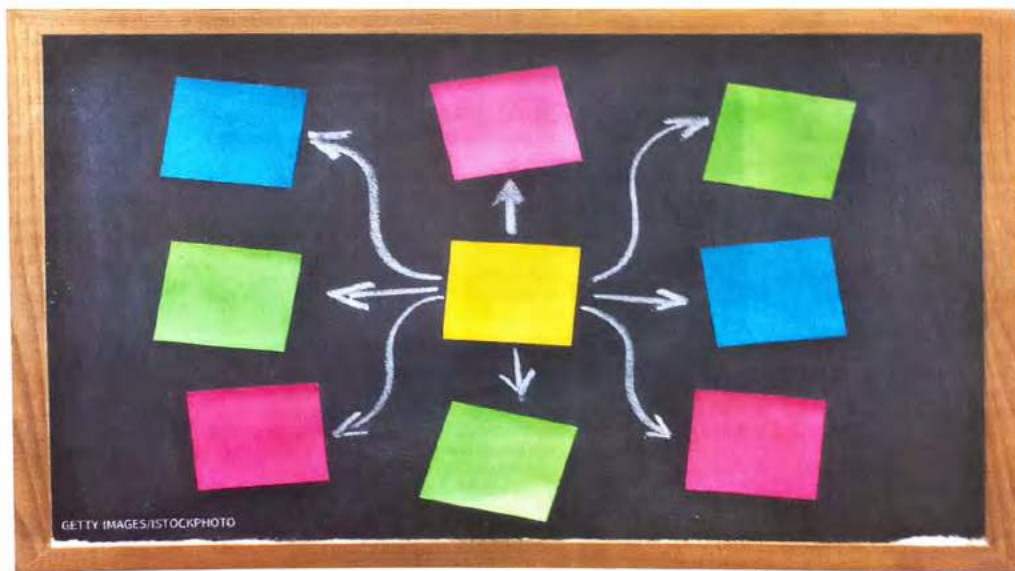
The works of Edward de Bono, Daniel Kahneman, and recently the tweet streams by Naval Ravikant all highlight the usefulness of mental models in life. Despite their practical value in student lives, mental models are often misconceived as purely academic theories, leading to their underutilisation.

#### Break from biases

As humans, we fall prey to cognitive biases, but society

# Cheat sheets for your mind

Collect, curate and capitalise on mental models to unbox the potential in learning



wants us to think systematically. Mental models help us approach situations systematically, be it by forming habits or framing a research problem. Even clashes between individuals or groups are, in effect, the differences between the mental models held by them.

The classic *Metaphors We Live By* (Lakoff and Johnson) shows how the metaphors we use in our daily language, as part of our mental models, shape our thinking. By choosing

the right metaphor, like viewing debates as dances instead of war, we can improve communication and collaboration. Broadening our understanding of mental models allows for considering alternative perspectives in communicating and problem-solving.

Education encompasses numerous thinking fallacies and biases. Consider this: If a few students perform poorly and the teacher generalises that the entire class lacks un-

derstanding, he is falling for the hasty generalisation fallacy: a cognitive bias. Confirmation bias compounds the issue, as the teacher seeks information that confirms his belief, disregarding contradictory evidence. To avoid such flawed thinking by recognising biases is crucial in education, where knowledge of mental models will help.

The quality of our thinking and learning depends on the models we possess. The more models we have, the broader

our arsenal becomes. Immersing ourselves in diverse mental models from Psychology, business, economics, and beyond, and applying them across different contexts is enriching. Note that mental models are not meant to dictate our thinking. Instead, they enable us to think differently and effectively without falling for biases. For instance, having the wrong mental model about learning Maths will make the subject difficult to grasp. Discern

which mental models serve us best among the many available. For example, the learning cycle aids learners and teachers in exploring, acquiring, and applying new knowledge. Note-taking methods like Cornell serve as mental models for cues, summarization, and recalling key points.

#### Concept collectors

Exploring mental models as a hobby unlocks boundless possibilities for enriching all aspects of life. To use mental models effectively, gather a wide range of them. Mental models transcend disciplines, much like 'thought experiments' in philosophy and physics. Just as 'leverage' is a mental model in physics as well as investments, 'opportunity costs' from economics have applications in all areas of life. Countless mental models exist across various domains of knowledge for our use. Books like Rolf Dobelli's *The Art of Thinking Clearly*, *Super Thinking* by Weinberg, and McCann and Shane Parrish's *The Great Mental Models* are excellent starting points.

Every culture has its own mental models, a reservoir of accumulated wisdom, of many scholars and thinkers who walked before us. The Pan-Chatrautra exemplifies diverse mental models through tables. Using different forms of mental models is the clearest way to change the way we see the world. When we know many mental models, we come out of living the story of blind men and the elephant.

Views expressed in this article are personal

The writer is Deputy Secretary, University Grants Commission

WU/1

# Homework for NCERT

Rationalisation in textbooks was meant to alleviate Covid stress. NCERT should assure parents that it will revisit and review



MAMIDALA JAGADESH KUMAR

SCIENTISTS AND EDUCATORS have recently expressed consternation about the rationalisation of NCERT science textbooks. Before we look at these concerns, let us remind ourselves that our students went through a challenging situation during the last three years due to the Covid pandemic. They were deprived of their natural environment of schools and friends and were confined to their homes. This naturally led to stress among them. Several measures had to be taken to address this challenge. To keep continuity in the teaching-learning processes, online teaching was adopted. To address the issue of reducing the academic load, particularly for school students, NCERT dropped some portions of the syllabus during the pandemic. Parents, students, and educators received it well.

Experts in some quarters, however, raised concerns when the NCERT decided to continue with the truncated science syllabus of the Covid period, as seen in the just-published NCERT Class 10 science textbooks. The question is, won't that leave students with an incomplete view of science — particularly those who do not progress to Classes 11 and 12?

In some respects, I agree with the criticism that teaching evolution, the periodic table and similar topics only in Classes 11 and 12 — skipping them at earlier stages — will impact all students, especially those who drop out of school by the end of Class 10 or choose to study disciplines other than science at a later stage. The global practice is that topics such as evolution, the periodic table and sources of energy are taught to students before they complete 10th standard.

But let us not jump to conclusions and doubt NCERT's intentions. This criticism of the Covid period "syllabus rationalisation" and its continuation in this academic year presupposes that NCERT will not look at the truncated syllabus and revise it. The basis for syllabus rationalisation by NCERT has not come out of the blue. The Covid period did affect the learning experience of our students. Students who will now enter Classes 9 and 10 were in Classes 7 and 8 during the

Covid period. They experienced diminished learning outcomes beyond their control. NCERT might have thought it prudent to keep the truncated syllabus of the Covid period for one more year so the students who are now in Classes 9 and 10 are not subjected to undue stress. Such thinking, however, was more than merely superficial. NCERT's decision was likely taken after feedback from stakeholders and experts. I am sure NCERT will revert to a more comprehensive science syllabus in school textbooks. NCERT is an expert body and it will revisit and revise all these topics — as it has been doing all along so that our students acquire a broad idea of the emerging science topics during their schooling.

To ease the apprehensions of parents and students, NCERT should clarify that this year's truncated science syllabus is only a temporary phase and it will fix the science syllabus in the 2024 academic session. That would be the rational thing to do. We cannot continue to teach our school students trimmed science. In school education, topics such as evolution, the periodic table, and energy sources should be introduced as early as Class 6 to Class 8 to stoke students' curiosity. It is not uncommon to see such a practice in school curricula, globally. Students can then study these topics in depth up to the 12th standard. I am sure NCERT is working on a holistic revision of the science syllabus without burdening the students with a lot of information.

NCERT science books have been of high quality and have addressed the learning goals of generations of students. Science is global. Therefore, we must examine how science is taught worldwide. NCERT should ensure that the science textbooks from Class 6 to Class 10 carry the basic concepts in all branches of natural sciences (earth, life, physical, and space sciences) and also contain emerging concepts in science, engineering, and technology — all this should be done gradually. By the time they complete the 10th standard, our students must be trained to develop ways of thinking such as interpreting data, synthesising information, meaningfully explaining observed phenomena, designing solutions to problems, and acquiring system-level appreciation cutting across realms of science. These are global approaches and are in tune with NEP2020. NCERT is well endowed with expertise to secure that our school science books are top-standard. I am sure NCERT's science books will continue to ignite the imagination of our students.

The writer is Chairman, UGC and former VC of JNU. Views expressed are personal

10/19/15

# In non-English language Wikipedia, Urdu, Hindi and Tamil lead

Among languages mostly confined to a State, Tamil dominates with over 1.5 lakh articles

## DATA POINT

Vignesh Radhakrishnan

In India, if we consider non-English language Wikipedia, the highest number of articles are available in Urdu, Hindi and Tamil. A non-English language Wikipedia is not a translation of English articles. It is self-sustaining: active users and moderators create and moderate content in their languages. Among languages which are mostly confined to a State, Tamil leads by a wide margin, with 1.6 times more articles than the second best, Marathi, followed by Malayalam and Telugu.

Understandably, when all the global languages are considered, English leads the list with 66,71,236 articles. **Chart 1** lists the 320 languages in which Wikipedia articles are available. The bigger the size of the bubble, the more the number of articles. Interestingly, Cebuano, a regional language spoken widely in the Philippines, has the second highest number of articles in Wikipedia (61,23,197). The Cebuano entries are written with Latin alphabets. However, news reports show that many entries were made in Cebuano by a bot.

German (around 28.1 lakh), Swedish (25.6 lakh), French (25.3 lakh) and Dutch (21.2 lakh) are the other prominent languages in which a considerable number of Wikipedia articles are maintained. There are relatively few articles in Chinese and Cantonese (13.6 lakh articles and 1.3 lakh, respectively) despite the fact that many more people speak these languages.

**Chart 2** lists the 23 languages spoken in India in which Wikipedia articles are available. Urdu, Hindi, and Tamil lead with 1.5 lakh-2 lakh articles each, followed by Bangla, spoken widely in West Bengal and Bangladesh, with 1.4 lakh articles. Among other languages confined to a State, Marathi, Malayalam, Telugu, and

Punjabi dominate, with 0.5 lakh-1 lakh articles each. There were around 12,000 articles in Sanskrit, and around 15,000 in Sindhi.

There are no Wikipedia articles in two of the 22 languages in the Eighth Schedule of the Constitution: Bodo and Dogri. On the other hand, Bhojpuri, Bishnupriya, and Tulu (with just 1,884 articles and featuring last) are the non-scheduled languages in which Wikipedia articles are available. Of them, interestingly, there were over 25,000 articles in Bishnupriya, which had 79,646 recorded speakers as per the 2011 Census. The number of articles in Bishnupriya is just 5,000 less than the entries in Gujarati and Kannada.

**Chart 3** shows the number of Wikipedia administrators available in each language, who can delete and undelete pages, block users, edit protected pages, and grant rights to others. They have been given extra editing privileges by the Wikipedia community. English language administrators dominate (898), while German and French are a distant second and third. Among the Indian languages, Tamil leads with 35 administrators, followed by Malayalam (15) and Bangla (14). Hindi has six administrators and Sanskrit, three.

**Chart 4** shows the number of Wikipedia users. A user is one who has created an account on the site. Those who browse Wikipedia without registrations are not considered users. English dominates with over 4.5 crore users, while all the other languages have less than 1 crore users. Among the Indian languages, Hindi dominates with 7.6 lakh users, and among languages mostly confined to a State, Tamil leads with 2.2 lakh.

**Chart 5** shows the number of active Wikipedia users. An active user is a registered user who has performed an action in the last one month, which includes editing an article or taking part in page discussions. The dominant languages of active users were similar to that of the users.



Chart 1 | The chart shows the 320 languages in which Wikipedia articles are available

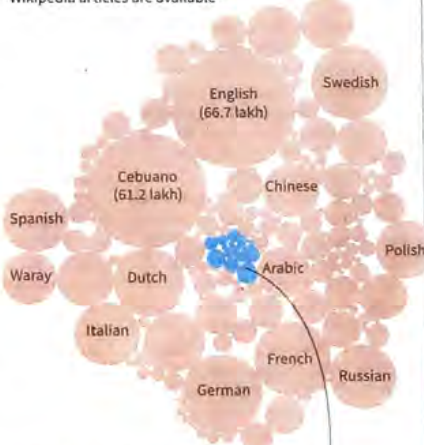


Chart 2 | The chart shows the 23 languages spoken in India in which Wikipedia articles are available



## 320 languages and counting...

The world's most active and collaboratively built encyclopedia is now in 320 languages including 20 of India's Scheduled Languages. Here is a language-wise break-up of articles on Wikipedia. Charts are based on data sourced from meta.wikimedia.org and the Census 2011 website



Chart 3 | The number of Wikipedia administrators who have been given extra editing privileges

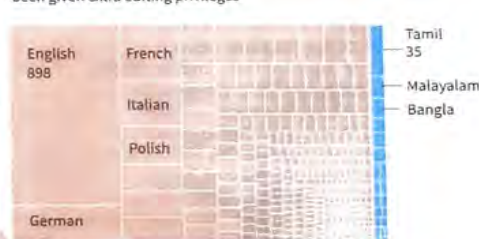


Chart 4 | The chart shows the number of Wikipedia users. A user is one who has created an account on the site



Chart 5 | The number of active Wikipedia users (a registered user who has performed an action in the last one month)



# Quest for parity in education

The prevailing inequality in access to quality education in India, exacerbated by the pandemic, urges teachers to act responsibly towards materialising the provisions of NEP



SANDIP BANERJEE

When the concept of planning was adopted by the Government of India after independence, one of the major objectives of planning was distributive justice. This was pertinent because the burden of colonial rule had left the common masses deprived of the basic amenities of living. Education was one of the top priorities in this list of deprivations. As time has progressed, we have adopted policies to bring more and more people into the ambit of education. It has been believed, and rightly so, that education is the panacea for all social evils. As a result, governments, both at the state and central levels, have emphasized opening educational institutions in the farthest and remotest areas. The three essentials of education, generally accepted to be opportunity, parity, and quality, apply to both elementary and higher education.

With the New Education Policy already in place, it is time to evaluate the link between education and employment. When attempting to do so, skill development comes into consideration. Now, all these things are actually possible when students in various institutions, both at the school and higher levels, cutting across geographical barriers, can receive proper training in classrooms. There is a very popular saying by Abraham Lincoln – “If I have six hours to chop down a tree, then I shall take four hours in sharpening the axe.” So, sharpening skills is paramount. If the question of opportunity arises, it should cater to all, but unfortunately, there is a visible disparity in the quality of education and learning outcomes of students. This



Since it is difficult to judge the accountability of a teacher, their inner urge to improve students' life becomes an essential prerequisite

disparity widens as we move from urban to rural areas or even from reputed institutions to institutions of lesser repute. The analysis of reasons for such a manifestation focuses on the lack of empathy among many teachers. The government can initiate projects and schemes to improve the scope of education, but without proper involvement of the teaching community, all government initiatives remain unfulfilled. It is high time to remember this truth because COVID-19 has dented the fabric of our education system, causing indelible damage.

Recently, while remembering Tagore on his birth anniversary, few might have recollected his famous observation that marks the difference between ‘learning’ and ‘education’. The purpose of education is to open the corridor of human thoughts. Unfortunately, in many educational centres, especially higher education institutions like colleges, particularly in remote areas, classes are not always properly conducted. Teachers who originally reside in cities or district towns find it difficult to

cope with the distance, and this impacts the quality of teaching. It has been heard that classes are not always regular due to the simple reason of teachers being absent. This may not be happening everywhere, but it is happening in some places, and if it is true, those areas are a cause for real concern. We must acknowledge that teaching as a vocation is different from most. Here, integrity and suavity are highly valued, and the inner conscience also plays a significant role. The situation requires an inner urge all the more because it is very difficult to judge the accountability of a teacher. Since there is no absolute directive about teaching methodology and since the results or learning outcomes of students are not always the disciplinary yardsticks of service benefits, teachers need to maintain their professional accountability by themselves. The teaching community should justify themselves to the students and only the students. This is part of their social commitment. So, whether the places of jobs are nearer or far-

ther, it is immaterial; moreover, the participation of students in the learning system depends on how the teachers inspire them. If the teachers set a bad example, it is detrimental to the teaching-learning process. There are genuine challenges influencing the act of teaching. There are two sides to the coin, and both sides need to be taken into account. In some colleges, the subject combination and the demography of the area do not match. Factors related to infrastructure and academic facilities might also be regressive. The pupil-teacher ratio is not always on the bright side. However, the quality of teaching should not degrade. The areas of shortfall must improve, but for that, the contribution of teachers is mandatory. Social interaction among teachers is vital for the successful deliberation of teaching. In a scenario where teachers are not very attentive in attendance, there is hardly any social interaction, and the students remain strangers to the teachers. Teachers need to understand that the fast-changing landscape of education is redefining the role of educators.

In the New Education Policy, emphasis is placed on vocational attainment. The new structure for the graduation course, with four years for graduation with honours, demands a more meticulous approach on the part of teachers. Since a student receives an academic testimonial at the end of each year of their curriculum during the four years of graduation, it is even more relevant that the proper learning outcomes match the academic certificate received by the student. Another significant issue is the process of transitioning from one college under one university to another college

under a different university. If colleges in remote locations do not provide proper teaching, a student who migrates from a rural-based college to an urban-based college will struggle to cope with the next academic content. It is high time for all of us to realize that rural areas are an integral part of our education system. The government has initiatives to successfully implement the idea of inclusive education, but any effort in the education field must be complemented by the teaching community. As far as infrastructure and transportation-related issues are concerned, the government, whether at the central or respective state level, needs to take note of them.

The pandemic has created a constraint in the education process that may eventually lead to the emergence of a new group of unaccomplished professionals. In the midst of this intellectual crisis, who else but the teachers can come to the rescue? It is relevant to shake off the sloth that has gripped the minds of some. Every student has the right to be educated; that is what society aspires to. Professional manipulation is not uncommon; it happens. However, if it happens in teaching, it is not acceptable. Teaching is not merely the completion of a curriculum or syllabus; it is human resource development. It can make or break a society. Any impediment can be overcome through sincere efforts, and teaching is no exception to that. The gap between what ought to be done and what is actually done must be bridged. Nothing should prompt a teacher to commit injustice in their vocational employment.

*The writer is an educator from Kolkata. Views expressed are personal*



# What makes people switch careers to teaching?

ERIN SIOSTROM, REECE MILLS & THERESA BOURKE

**T**eacher shortages around Australia mean there is an ongoing debate about how to attract, retain and educate more teachers.

One part of the push to increase teacher numbers is encouraging people to swap their current career for a teaching role.

Mid-career or 'career change' students are increasingly common in teacher education programmes. The most recent Australian data shows that as of 2017, one-third of new applicants were 25 or older.

We also know there are plenty of people interested. A 2022 survey by the federal government's Behavioural Economics Team found one in three mid-career individuals was open to the idea of teaching.

Last August, the Albanese government set up an expert panel on teacher education, in part due to concerns about teacher shortages. Led by Sydney University vice chancellor Mark Scott (who also chairs The Conversation's board), the panel is due to submit a report next month. One of the key items it is looking at is how to 'improve' teaching degrees to attract mid-career entrants.

What does the research tell us about the people who go into teaching mid-career? And what lessons does it hold for policymakers who want them to stay in their new job?

## OUR RESEARCH

Our new research reviewed studies on career-change teachers from the past two decades.

It examined 29 studies on career-change teachers to identify who chooses to enter teaching, why they make the switch, and the barriers that can stop them from changing careers. This international review explored the experiences of career-change teachers worldwide, including Australian, US, UK, and New Zealand studies.

### Who enters the classroom?

Career-change Teachers come from many different backgrounds. We identified more than 140 prior careers. There were former tradespeople, lawyers, and scientists. Others had hospitality, administration, or retail experience. We also found that people often chose teaching after experience in teacher-like roles. Many previously worked in childcare, tutoring, volunteering in classrooms, coaching sports, or working with children in community organisations. Some mentioned work leadership roles such as staff training or mentoring.

These experiences helped career changers see they were suited to teaching. Many realised that having skills such as effective communication, organisation, resilience, and being able to build relationships were useful for teaching. Others chose teaching because they liked working with children or wanted to share expertise in a field they



were passionate about, such as science. Several were inspired by role models or had family members who were teachers.

### What makes someone switch to teaching?

Many had thought about becoming teachers for a long time, calling it a long-standing interest or 'someday' career. This desire often predated their first career choice, but life circumstances played a big role in choosing when to make the switch. Some had become dissatisfied with their job because of boredom, long hours, poor conditions, or because they wanted a career that felt more meaningful. Having children made teaching a more attractive option for many. Career changers felt the shorter working days, hours that aligned with their children's school, and regular holidays would allow them to better manage family responsibilities. We also found that global circumstances influenced the choice to teach. Some career changers chose this pathway when their jobs became unstable during industry declines, offshore outsourcing, or events such as the global financial crisis.

### What does and does not support career changers?

Our research also found that career

changers often faced challenges when choosing to teach. Career-change Teachers reported that friends and family usually supported the idea of choosing teaching. However, in some cases, when individuals were switching from high-status careers (as scientists or doctors), people questioned the change, seeing teaching as a drop. Mature entrants sometimes struggle in teacher education programmes because of study costs and a lack of financial support, especially during lengthy unpaid professional placements. Others felt teacher education programmes often lacked flexibility or didn't recognise the unique needs, skills, and experiences of mid-career students. Supports such as scholarships, flexible timetables, and mentoring helped them balance their teaching studies with their existing life responsibilities.

### EXPECTATIONS VERSUS REALITY

Once mid-career teachers made it into a job, their ideas about teaching did not always match reality. Some were shocked by the high workloads, excessive administration demands, continual government-driven changes, and lack of professional autonomy. Indeed, many career-change teachers end up leaving the profession early. An estimated 30-50 per cent of all new Aus-

tralian teachers leave the profession within the first five years, and for career-change teachers, this figure is estimated to be 25 per cent higher.

### What can we do differently?

To encourage more mid-career entrants to join the teaching profession, we need to better appreciate the unique strengths and experiences they bring from their previous lives. Mid-career entrants come to schools with new ideas and enthusiasm to make a difference and share their real-world and industry experiences.

One option is to formally recognise the extensive industry experience or advanced subject area qualifications (such as a PhD in chemistry) these career changers bring to schools. This could be done with expedited career progression or specialist roles within schools.

Schools could also offer increasingly flexible employment pathways (such as job-share arrangements or innovative timetabling) for career changers who want to maintain industry connections.

This could allow for school-industry partnerships that benefit students and let these teachers use their professional experiences to make a difference. In doing so, this crucial teaching workforce may feel they are making a positive contribution to their students and be more likely to stay.

(This article appeared in The Conversation, UK). Erin Slostrom is associate lecturer in science education, University of the Sunshine Coast. Reece Mills is senior lecturer, Queensland University of Technology & Theresa Bourke is associate professor and academic lead research, Queensland University of Technology.

# *Incorrect to say students support censorship on college campuses*

**BRADFORD VIVIAN**

**T**he claim that college students censor viewpoints with which they disagree is now common. Versions of this claim include the falsehood that students "shut down" most invited speakers on campuses, reject challenging ideas, and oppose conservative views.

Such cynical distortions dominate discussions of higher education today, misinform the public, and threaten both democracy and higher education.

Indeed, politicians in states such as Florida, Texas and Ohio argue that a so-called 'free speech crisis' on college campuses justifies stronger government control over what gets taught in universities.

Since 2020, numerous state legislatures have attempted to censor forms of speech on campuses by citing exaggerations about students and their studies. Passing laws to ban certain kinds of speech or ideas from college campuses is no way to promote true free speech and intellectual diversity. The most common targets of such censorship are programmes that discuss race, gender, sexuality, and other forms of multiculturalism.

My concerns over public discourse about higher education extend from my book on popular misinformation about universities and why it threatens democracy. In it, I show that many negative perceptions of students and universities rest on factual distortions and exaggerations.

The character of public debates about higher education is important. Millions of Americans rely on a healthy system of university education for pro-

fessional and personal success. Rampant cynicism about higher education, leading to declines in public support for it, only undermines their pursuits.

Based on my research, I offer alternative ways to frame debates about higher education. They can lead to discussions that are more constructive and accurate while better protecting fundamental American values such as free speech and democracy.

## **AVOID STEREOTYPES ABOUT COLLEGE STUDENTS**

The idea that college students are hostile to opposing viewpoints is false. Pundits and media personalities have promoted this falsehood aggressively. Such figures have benefited, politically or financially, from sensationalism about a college "free speech crisis."

In opinion polls, college students typically express stronger support for free speech and diverse viewpoints than other groups. Partisan organisations often cherry-pick that data to make it seem otherwise. But poll results tell only part of the story about college campuses today. Several thousand institutions make up U.S. higher education. The system includes hundreds of thousands of students from different backgrounds. College campuses are often more demographically and intellectually diverse than surrounding communities.

Judgements about higher education based on sweeping generalisations about college students conflict with the full realities of campus life. A wider range of perspectives, including those from students themselves, can enrich debates about university education.

## **CONSIDER ALL FORUMS FOR FREE SPEECH IN UNIVERSITIES**

Universities protect free speech more effectively than other parts of society. They don't do so perfectly, but more effectively. Universities are major centres for the study of the First Amendment, the free press, human rights, cultural differences, international diplomacy, conflict resolution, and more. Many institutions require students to take basic speech and writing courses that enhance their skills in argument and debate.

Manufactured outrage about college students who protest invited speakers fuels sensationalism about free speech on campuses. Despite occasional disruptions over bigoted speakers, universities offer numerous forums for free speech, open debate, and intellectual diversity. Just one large university holds thousands of classes, meetings, performances, and other events on a daily basis. People freely express their views and pursue new ideas in those settings. Now multiply that reality by several thousand different institutions. Debates over free speech in higher education can be improved by acknowledging the many forums in which people speak freely every day.

## **RECOGNISE THE TRUE THREATS TO FREE SPEECH ON CAMPUSES**

For the past several years, many state legislatures have promoted the falsehood that universities are hostile to various ideas. The most commonly cited examples are conservative ideas, traditional expressions of patriotism, and great works of Western literature.



The notion of hostility to such ideas on college campuses has surfaced in numerous bills that create new forms of state interference in education. Thirty-five pieces of legislation banning diversity, equity, and inclusion programmes in colleges have been introduced in state legislatures. So far, three of them have been signed into law, while four are pending final legislative approval.

Tenure for faculty members, which protects independent thought, is also under assault in states such as Florida and Texas. Politicians in those states justify ending tenure protections by claiming that professors teach students to censor free speech. Such rising government interference creates a genuine threat to free speech on college campuses and in society beyond. A historic increase in state censorship, which began with higher education, has spilled over into censorship of

materials about race, gender, sexuality, and multiculturalism in K-12 schools and public libraries.

Advocacy organisations like the ACLU and the American Association of University Professors have condemned this censorship. So have numerous conservative leaders. Informed scrutiny of university policies and what faculty members teach is always welcome. But cynical distortions have fueled anti-democratic censorship of universities, not constructive efforts to improve them.

## **UNDERSTAND THE ROLE OF ACADEMIC FREEDOM**

The ability of citizens to exercise academic freedom is not only vital in education. It's also training for democracy. Academic freedom includes the freedom to attend the university of one's choice. The freedom to learn what one chooses at that university

The freedom of an institution to offer a wide range of subject matter to students and the freedom to teach or conduct research without political interference. These freedoms are not reserved for Ivy League universities. U.S. higher education includes state schools and community colleges that serve middle- and working-class communities. Those institutions are the backbone of many professions, from health care and technology to engineering and education. The quality of public debate over free speech in higher education matters. Government interference with colleges does not punish elites. It rewards deeply cynical views of higher education and restricts a freedom that should be available to all Americans.

The author is a professor of communication arts and sciences at Penn State. (The article appeared in The Conversation, UK).

# Coach Red

*Kota-type exam prep factories help students clear tough entrance tests, but at great future cost*

India's 23 IITs are its most internationally respected higher education brand. Of the around 11 lakh students who tried to make it into these elite institutions this year, around 43,700 have crossed the JEE Advanced hurdle. With the pass rate being only 0.04%, successful students and their families are understandably celebrating very, very big. So are the coaching institutes that played a critical role in many of the triumphs. Kota institutes claim that 50 of the top 100 spots have been won by their students. But they have competition across the country. This year's topper V Chidvilas Reddy took coaching in Hyderabad, last year's topper RK Shishir in Bengaluru. Shishir said in as many words, "Coaching has become a necessity now."

This is hardly unique to engineering. Medicine is the same. Indeed, when a state like Tamil Nadu wants to help more government school students clear NEET, free or heavily subsidised coaching programmes are part of the new-age policy mix. The UPSC exam, which recruits central government's 'Group A' officers with a sub 0.5% success rate, likewise is symbiotically tied to coaching factories. But despite being anchored around rote learning, this industry itself is not hidebound. Rather, it is quite nimble and adaptive. For example, no sooner did the BDesign course start trending among students that seductive coaching packages for it became available in the market. CUET has also seen that India's coaching culture races ahead of any "new" evaluation system.

The shortage of quality higher education seats means parents continue to feel pressurised to put their children into the coaching grindmill, even when they can see the toll this takes on the school years. But though the rewards speak for themselves, the costs are no less significant. Robotic coaching is poor preparation for the robot age that lies ahead for the students, which will demand more and more critical and conceptual thinking. Plus, a rigid pipeline to institutes of excellence ends up hurting them too. By its very nature, groupthink limits goals and visions and thus achievements. This is not at all a problem with an easy solution. Yet, to prepare students for a professional life where professions may disappear one after another, address it we must. How to put inventiveness, creativity, humanity back into learning processes is the great challenge for the country's education ecosystem today.



703/16

# पाठ्यक्रम परिवर्तन पर हठधर्मिता

**शिक्षा** परिवर्तन की सबसे सबल संवाहिका होती है। उसमें वांछित परिवर्तन किए बिना समृद्ध, सशक्त, एवं आत्मनिर्भर भारत की कल्पना भी नहीं की जा सकती, परंतु परिवर्तन स्वीकार करना तो दूर, दुर्भाग्य से उसकी हर पदचाप पर भारत का कथित प्रगतिशील खेमा विवाद एवं हायतौबा शुरू कर देता है। ताजा विवाद राष्ट्रीय शैक्षिक अनुसंधान एवं प्रशिक्षण परिषद यानी एनसीईआरटी द्वारा पाठ्यपुस्तकों में किए जा रहे बदलाव पर खड़ा किया जा रहा है। यह विवाद योगेंद्र यादव और सुहास पल्लीकर द्वारा परिषद की छह किताबों से अपना नाम हटाए जाने की मांग के बाद शुरू हुआ। उसके बाद देश के 33 अन्य शिक्षाविदों ने भी एनसीईआरटी की पुस्तकों से अपना नाम हटाने की मांग की और पाठ्यक्रमों में किए जा रहे बदलाव पर विरोध जताया। अब इस बदलाव के समर्थन में विश्वविद्यालय अनुदान आयोग के अध्यक्ष जगदीश कुमार समेत शीर्ष विश्वविद्यालयों के कुलपतियों, तमाम शिक्षण-संस्थाओं के निदेशकों एवं लगभग 239 शिक्षाविदों ने साझा बयान जारी कर कहा है कि कुछ लोग अपने स्वार्थ एवं बौद्धिक अहंकार में परिषद को बदनाम करने की कोशिश कर रहे हैं तथा पाठ्यक्रमों को अद्यतन बनाने की प्रक्रिया में जानबूझकर बाधा डाल रहे हैं।

पाठ्यक्रम को ज्ञानवर्द्धक, बोधगम्य, समयानुकूल और युक्तिसंगत बनाए रखने के उद्देश्य से एनसीईआरटी समय-समय पर उसमें वांछित परिवर्तन एवं संशोधन करती रही है, परंतु विगत 17 वर्षों से पाठ्यपुस्तकों एवं पाठ्यक्रमों में कोई मूलभूत परिवर्तन नहीं किया गया है। हां, बच्चों पर अध्ययन सामग्री का भार कम करने, विषयवस्तु के दौहगव से बचने एवं व्यावहारिक आवश्यकताओं को ध्यान में रखते हुए, कोविड काल और उसके बाद भिन्न भिन्न कक्षाओं के कुछ विषयों के पाठ्यक्रमों में चट पाठ जोड़ या घटाए अवश्य गए हैं। जब लगभग हर 15 वर्ष के अंतराल पर पाठ्यक्रम बदल जाते हैं तब क्या नई पाठ्य की शिक्षा संभव है? अपेक्षा एवं आवश्यकता नहीं बदलेगी? क्या इसकी अभिरचनया एवं आवश्यकताओं को पाठ्यपुस्तकों में स्थान नहीं मिलना चाहिए? ज्ञान एवं सूचना के फल फल विस्फोट वाले आत के तकनीकी युग में पाठ्यपुस्तकों को यथावत ढोते रहने की जिद क्या अवगत की जा सकती है?



प्रणय कुमार



पाठ्यपुस्तकों में समयानुकूल परिवर्तन आवश्यक ● फाइल क्या यह सत्य नहीं कि बिना परिवर्द्धन या परिवर्तन के कोई भी विषय प्रासंगिक एवं जीवनोपयोगी नहीं रह जाएगा? क्या इसमें भी कोई दो राय हो सकती है कि भारत की युवा आबादी के लिए आज मूल्यपरक, कौशल-आधारित रोजगारोन्मुखी शिक्षा की महती आवश्यकता है? यही कारण है कि राष्ट्रीय शिक्षा नीति-2020 के अंतर्गत छठी कक्षा से ही व्यावसायिक प्रशिक्षण देने की बात कही गई है। इसके लिए मिडिल स्तर पर सप्ताह में ढाई घंटे तथा सेकेंडरी स्तर पर तीन घंटे का समय रखने को कहा गया है। विद्यार्थियों के मूल्यांकन में भी व्यावहारिक ज्ञान का मान (वेटेज) 75 प्रतिशत रखा गया है।

आज कारपोरेट जगत से लेकर अधिकांश संस्थाएं एक ही समय में मल्टीटास्किंग अभ्यर्थियों को काम पर रखना पसंद करती हैं। इसके लिए राष्ट्रीय शिक्षा नीति में बहु विषयक ज्ञान पर बल दिया गया है और मुख्य (कोर) के साथ साथ सहायक (माइनर) पाठ्यक्रम के चयन का भी विकल्प रखा गया है। विद्यार्थियों में सामाजिकता, सज्जनात्मकता, अनुशासन एवं नेतृत्व कौशल आदि को बढ़ावा देने के लिए पाठ्य सहाय्यी क्रियाकलापी योग एवं खेलकूद आदि को विशेष भावना से संबोधित है। ऐसा नीतिनिर्धार्य उन्नी तनाव एवं अवसाद से मुक्त रखने में भी सहायक होता है।

क्या आज के तकनीकी युग में पाठ्यपुस्तकों को यथावत ढोते रहने की जिद तर्कसंगत कही जा सकती है?

क्या इन लक्ष्यों की प्राप्ति पाठ्यक्रम में परिवर्तन के बिना संभव होगी?

वैश्विक प्रतिस्पर्द्धा वाले इस दौर में हमें भी विकसित दुनिया के साथ कदम मिलाकर चलना होगा। इसके लिए शिक्षा के आधारभूत संसाधन, पाठ्यपुस्तकों की विषयवस्तु, शिक्षण-पद्धति आदि में आमूलचूल परिवर्तन करना होगा। क्या यह भी बताने की आवश्यकता है कि भौतिकी, रसायनशास्त्र, जीवविज्ञान, कंप्यूटर, सूचना-प्रौद्योगिकी, वाणिज्य, अर्थशास्त्र, भूगोल एवं पर्यावरण जैसे अनेक विषय अद्यतन न किए जाने की स्थिति में अप्रासंगिक सिद्ध होंगे? इन्हें अद्यतन बनाए रखने के लिए इनसे संबंधित नवीन शोध एवं अनुसंधान के निष्कर्षों को पाठ्यपुस्तकों में सम्मिलित करना होगा। प्रायः यह देखने में आता है कि इतिहास, साहित्य एवं राजनीतिशास्त्र के पाठ्यक्रमों पर सर्वाधिक विवाद होता है। उसमें थोड़ा-बहुत परिवर्तन किए जाने पर भी क्रंदन सुनाई पड़ने लगता है। क्या यह अच्छा नहीं रहेगा कि इतिहास की पाठ्यपुस्तकों में अतीत के वैभवशाली अध्यायों, स्वत्व एवं स्वाधीनता के संघर्षों के चित्रण के साथ-साथ स्वतंत्र भारत की 75 वर्ष की उपलब्धियों का भी लेखा-जोखा हो? आखिर इतिहास की विषयवस्तु राजाओं, सामंतों-सुल्तानों या राज्य विस्तार की आकांक्षा से किए गए आक्रमणों तक ही क्यों सीमित रहने चाहिए? क्या उसमें सर्वसाधारण के आदर्शों आकांक्षाओं, मान्यताओं विश्वासों को स्थान नहीं मिलना चाहिए? इतिहास को पराजय नहीं जय एवं संघर्ष की गाथा के रूप में पढ़ाए जाने पर मुवाओ में साहस और स्वाभिमान का संचार होगा। लुप्त हो रहे संवेदनाओं के दौर में क्या साहित्य का उपयोग सामाजिक, सांस्कृतिक संवेदनाओं को जागृत करने के लिए नहीं किया जाना चाहिए? राजनीतिशास्त्र के माध्यम से भारतीय लोकतंत्र की गौरवशाली यात्रा पर प्रकाश डालने, सभी प्रकार के राजनैतिक दलों को पढ़ने पढ़ाने, विविधता में एकत्व को देखने दिखाने, विद्यार्थियों में नागरिकजीव एवं सर्वोपार्जन मूल्यों के प्रति गहरे विकसित करने पर भला किसे को क्यों आपत्ति होना चाहिए? पाठ्यक्रम में परिवर्तन समय की मांग है जबकि रसाक्त विरोध कोरी हठधर्मिता है।

लेखक शिक्षाविद डा. शिक्षा, सीएन के संस्थापक हैं।

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# How to strengthen collaboration between industry and academia

**Professor Aman Oo**

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Fostering collaboration between academia and industry is crucial for driving innovation, addressing real-world challenges, advancing research, cultivating an industry-ready workforce to alleviate the shortage of skilled professionals. Globally, according to the United States Bureau of Labor Statistics, employment of engineers is projected to grow 4% from 2020 to 2030, with a particularly strong growth in demand for highly skilled engineers in renewable energy.

According to various reports by many Indian organisations, demand for engineers is expected to grow by 6.6% annually between 2020 and 2025 and the country may require as many as 10 million new engineers by 2025 to meet the demand from various sectors such as manufacturing, infrastructure, and construction, with an increasing needs as well for engineers in emerging sectors such as renewable energy and biomedical engineering areas. There will be equivalent demand for graduates in other sectors as well. Accordingly, it is vital that academia and industry foster close collaboration to address global challenges and advance research and innovation, including the development of competent workforce.

Universities serve the industry in two essential ways. Firstly, they provide a skilled and educated workforce that is

equipped with the knowledge and expertise required to meet the demands of various industries. Through their academic programs, universities prepare students with specialized skills, critical thinking abilities, and a strong foundation in their respective fields, making them valuable assets for industry employers.

Secondly, universities serve as hubs of innovation and entrepreneurship, fostering a culture of creativity and generating groundbreaking ideas. Academics and researchers at universities engage in cutting-edge research, explore new technologies, and develop innovative solutions to complex problems. These ideas can spark the creation of new business ventures, drive industry growth, and lead to the development of disruptive technologies and services. By nurturing a symbiotic relationship between academia and industry, universities provide a pipeline of skilled professionals while also contributing to the creation of an entrepreneurial ecosystem that promotes economic development and drives innovation in various sectors.

Both academia and industry possess distinct strengths and perspectives that, when synergistically combined, can result in groundbreaking advancements with profound societal and economic impact. However, it is essential to acknowledge that there are inherent differences in how universities and industries operate, and their motivations may not align sim-

plistically.

Universities are primarily driven by a commitment to contribute to theoretical knowledge, foster critical thinking, and conduct research that pushes the boundaries of human understanding. They prioritize academic freedom, independent inquiry, and the pursuit of knowledge for its own sake and create future workforce. Universities serve as incubators of innovation, nurturing intellectual curiosity and providing an environment conducive to exploring novel ideas and concepts.

On the other hand, industries operate within a competitive market ecosystem, where profitability and economic viability are critical considerations. Companies have to navigate financial constraints, market demands, and shareholder expectations while delivering products and services that meet consumer needs. Profitability serves as a driving force for industries, and decisions are often guided by market forces, cost-effectiveness, and commer-

cial viability.

These inherent differences in priorities and constraints can create challenges when attempting to foster collaboration between academia and industry. However, recognizing and navigating these differences can lead to fruitful partnerships that leverage the strengths of both sectors.

First and foremost, it is important to establish a formal partnership between universities and industries. These partnerships can take in various forms, such as joint research projects, technology transfer agreements, or industry-sponsored research centres. Joint research projects can address real-world problems and challenges leveraging the academic expertise in fundamental research and industry's practical knowledge and resources. It is critical to facilitate opportunities for researchers and students to work in industry settings through fellowships and internships. This enables academics and students to gain firsthand experience of industry challenges and practices while industry professionals benefit from academic insights and fresh perspectives. There has also been clear success in adopting co-op programs that provide students with opportunities to work in industry settings. This hands-on experience allows students to gain much needed practical skills before they enter the employment.

While it is paramount for industry and academic to col-

laborate proactively. Governments and funding agencies can also play a crucial role in fostering collaboration by creating financial incentive framework for joint research projects, industry-academia partnerships, and initiatives that promote collaboration.

As demonstrated to be successful, one strategy to encourage collaboration between academia and industry is to establish industry advisory boards. These boards can comprise individuals representing academia and industry who collectively offer guidance, counsel, and recommendations in critical domains such as research priorities, industry needs, curriculum development, and policy formulation.

In summary, universities serve the industry by providing a skilled workforce driving innovation through research and development, supporting entrepreneurship, and offering lifelong learning opportunities. The collaboration between universities and industries is mutually beneficial, as it contributes to economic growth, technological advancements, and the overall development of society. Recognizing the substantial challenges the world is facing, it is imperative that industry and academia forge a close partnership to bridge the divide and promote collaboration between academia and industry.

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**UNIVERSITIES  
SERVE AS HUBS OF  
INNOVATION WHILE  
FOSTERING A  
CULTURE OF  
CREATIVITY AND  
ENABLING THE  
GENERATION OF  
NEW IDEAS**

# The changing nature of education policy in India

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Education plays a pivotal role in shaping the future of any nation. In India, the evolution of education has been a dynamic process, adapting to the changing needs of society and striving to provide quality education to all. Over the years, India has witnessed significant shifts in its approach to education, with a changing perspective that emphasizes inclusivity, innovation, and holistic development. This article explores the evolution of education policy in India and the factors that have influenced its transformation.

## Historical Perspective

India's education system has a rich history that dates back by centuries. Ancient India boasted of renowned centers of learning like Nalanda and Takshashila, which attracted scholars from all over the world. However, with the advent of colonial rule, education underwent a significant transformation. The British introduced a system that aimed to serve their administrative needs rather than nurturing indigenous knowledge. This system focused on producing a class of clerks and low-level officials to serve the colonial apparatus.

## Post-Independence Reforms

After gaining independence in 1947, India embarked on a mission to rebuild its education system to address the diverse needs of its population. The government recognized education as a fundamental right and embarked on several reforms to ensure access, equity, and quality in education. The establishment of the University Grants Commission (UGC) and the All



In recent years, India has witnessed a significant shift in its education policy

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India Council for Technical Education (AICTE) were crucial milestones in regulating higher education and technical institutions.

## Shift towards Inclusivity

In recent decades, India has witnessed a significant shift in its education policy towards inclusivity. Recognizing the importance of providing education to marginalized communities, initiatives like the Right to Education (RTE) Act have been instrumental in ensuring access to education for all children, irrespective of their socio-economic background. Efforts have also been made to promote education among girls, tribal communities, and individuals with disabilities, aiming for a more inclusive society.

Focus on Skill Development

The changing landscape of the global economy and the demand for a skilled workforce have prompted India to emphasize skill development in its education policy. The National Skill Development Mission and

the Skill India campaign have been launched to bridge the gap between education and employability. Vocational training programs, apprenticeships, and entrepreneurship development initiatives have gained prominence, empowering individuals with practical skills that are aligned with the industry requirements.

## Embracing Innovation

The advancement of technology has revolutionized education in India. The government's Digital India campaign has facilitated the integration of technology in classrooms, providing access to digital resources, e-learning platforms, and virtual classrooms. The National Education Policy (NEP) 2020 has further emphasized the integration of technology, promoting online learning, digital literacy, and the use of artificial intelligence in education.

## Holistic Development

India's education policy has shifted from a purely academic

focus to a more holistic approach that nurtures the overall development of students. The NEP 2020 emphasizes the importance of a multidisciplinary education, promoting a combination of arts, sciences, sports, and vocational subjects. This approach aims to foster creativity, critical thinking, and well-rounded individuals capable of adapting to the challenges of the 21st century.

## Teacher Training

One of the key aspects of education policy evolution in India has been the emphasis on teacher training and capacity building.

Recognizing that teachers play a pivotal role in shaping the learning experience, efforts have been made to enhance their skills and knowledge through various training programs and professional development initiatives. The aim is to empower teachers with innovative teaching methodologies, pedagogical tools and techniques, and effective classroom

management strategies.

Private Sector Participation  
India's education policy has also witnessed a shift towards increased participation by the private sector. Recognizing the need for diversified educational opportunities, private schools and institutions have emerged as important contributors to the education landscape. This partnership between the public and private sectors has expanded access to quality education and provided a platform for innovation and experimentation.

The evolution of education policy in India reflects a progressive mindset that acknowledges the changing needs of society. From the post-independence reforms to the present emphasis on inclusivity, skill development, technology integration, and holistic development, India's education policy continues to evolve. There are, however, challenges like ensuring quality education for all, reducing educational disparities, and addressing the digital divide. It is imperative for stakeholders to work collaboratively to overcome these challenges and build an education system that empowers every individual to reach their full potential.

As India moves ahead, it is crucial to sustain the momentum of educational reforms, foster innovation, and create an inclusive and progressive learning environment that prepares students for the challenges and opportunities of the future. By embracing a dynamic and evolving education policy, India can empower its citizens to excel, contribute to society, and shape a prosperous future for the nation.

The author, Anil Somani, is a senior educationist and a former head of a reputed educational institution. He has been actively involved in education policy research and implementation for over two decades. His work focuses on promoting inclusive and quality education for all.

# Medical seat quota

The State government's decision to effect a ten per cent reservation of total MBBS seats for NRI/NRI-sponsored students who have cleared NEET UG is a retrograde one that needs to be revoked. Many quarters including the Indian Medical Association (IMA), Assam unit, have made clear their opposition to the move on justifiable grounds. Now onwards, the seats will be reserved annually after a deduction of 15 per cent all-India quota, Central pool, North Eastern Council quota, and Royal Government of Bhutan quota seats. This will effectively reduce the number of seats open for the general category students of the State. What the government has done is to put up medical seats in the State's medical colleges for sale at the cost of the deserving local candidates. As of now, the open category seats (at 375) are a meagre 25 per cent, which will plummet further with the government's uncalled-for indulgence towards the NRI. Coming at a time when locals have very few seats in which to compete due to the prevailing arrangement of large-scale reservations on various counts, the government's decision will hit them severely. This, in fact, will be tantamount to denying our own students a reasonable opportunity to compete for medical education. While the ostensible intent behind the government's decision is to garner revenue from the steep fees for NRI students, that cannot be a ground for deprivation of our own students. The NRIs have left their motherland seeking better opportunities abroad and there is nothing objectionable to that. But to accord them a red carpet welcome after they had left their home country and that too by riding roughshod over the legitimate interests of the local student community cannot be acceptable. It has also to be borne in mind that we have here very limited opportunities and access to higher education such as medical and the least we want is to have the government choking the existing limited opportunities for the locals.

Rather than coming up with unwarranted moves, the government needs to put its sustained focus on revamping the State's decrepit public health care system. While the sector has seen some improvement in the past few years following implementation of programmes such as NRHM and NHM, a lot still needs to be done to bring it to the level of advanced states of the country. Of late, financial assistance apart, there have been special relaxations in the required criteria for setting up medical colleges in the region, and such concessions must continue. Medical infrastructure in the region continues to be abysmal and large-scale government intervention is a must to make affordable medical care accessible to the masses. Unless we have a matching medical infrastructure together with competent medical professionals, 'health for all' will remain a non-starter. Different health indices continue to be well below national average testifying to the persisting deficiencies plaguing the sector in the State. While institutions for advanced medical treatment are an urgent necessity, of equal importance is to have dependable health care set-ups at different levels. *px/246*

# Fruitful proliferation

Nexus of Good



ANIL SWARUP

*The Haryana Early Literacy Development Impact Bonds programme is paving the way for improved foundational learning outcomes, setting a benchmark for other states*

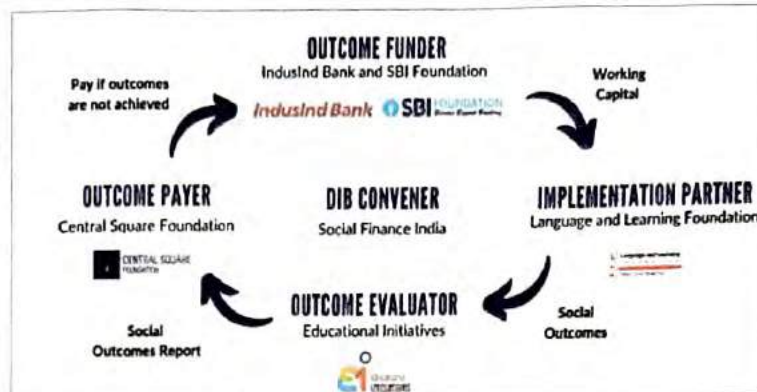
India, home to one of the largest educational systems in the world, has taken rapid strides to achieve 98.4 per cent enrolment in primary education. The focus has now shifted to improving learning outcomes and ensuring quality education at the primary level. An ASER Report 2022 highlights that while gross enrolment has seen an increase, the percentage of children in Class 3 in government or private schools who could read a Class 2 text reduced from 27.3 per cent in 2018 to 20.5 per cent in 2022 across states. Moreover, the percentage of children enrolled in Class 5 in government or private schools who could read a Class 2-level text dropped from 50.5 per cent in 2018 to 42.8 per cent in 2022.

Development Impact Bonds (DIB) are an innovative and outcome-oriented instrument for financing such development projects. A salient feature of DIB is the transfer of risk from public agencies to the private sector. Hence, it plays a catalytic role in encouraging private capital to complement traditional efforts and funding mechanisms. These DIBs are essentially result-based, meaning that outcome funds pay investors their principal plus returns only if these programmes succeed in delivering results. This alignment between financial and social returns incentivises the private sector to work more efficiently by rigorously monitoring performance periodically, and enabling service delivery to respond to new data simultaneously as it is collected and analysed.

## Haryana Early Literacy Development Impact Bond

Maahi, a Grade 1 student from Sundarpur, Haryana, who struggled to read initially, was able to read 70 words per minute (exceeding the Global Minimum Proficiency standards for reading), thanks to the Haryana Early Literacy Development Impact Bond programme. The first-ever DIB in India to leverage CSR funding for outcome payment exclusively focused on early literacy, Haryana DIB was the game-changer in redefining the primary education space.

This Rs 15.57-crore initiative was implemented by Language and Learning Foun-



Structure of the DIB programme

dation, with IndusInd Bank and SBI as outcome funders, Social Finance India as the DIB Convener, Central Square Foundation as outcome payers and Educational Initiatives as Outcome Evaluator.

The project's objectives were twofold: i) Improving literacy outcomes for Grade 1 and 2 students across seven districts of Haryana; and ii) Enhancing the capacity and commitment of the government educational system for improving foundational learning outcomes at the scale.

Earlier, Language and Learning Foundation had implemented a demonstration project in 175 schools in three blocks of Kurukshetra district of Haryana in 2018 under the aegis of Prarambhik Bhasha Shikshak Adhikaran programme. It had reported significant learning gains for 3,500 students and established a strong proof-of-concept. Based on this, the state government invited LLF to scale up the project to seven districts. Fortunately, the DIB Convener, Social Finance India (SFI), approached LLF at that time with a proposal.

## Unique design and approach

The Haryana Early Literacy DIB was pathbreaking in several ways. Firstly, it was the first time ever in India that the CSR Foundation had invested in an impact bond for education. Secondly, it was outcome-focused with the target (pre-agreed) outcomes set initially, and the results achieved exceeded the target by 3.5 times. Thirdly, it was implemented in collaboration with the government and provides a successful model for scaling up, and lastly, it establishes

flexibility in delivery, making it a desirable model for replication.

It had the following key components: i) Teacher Professional Development; ii) Strengthening Teacher Mentors in the government system through effective academic support and monitoring, courses on early language and learning and joint classroom visits; iii) Developing children's learning materials, such as workbooks, big books and other learning aids; and iv) Assessment and remediation of learning outcomes.

## Successful pivot during COVID-19

While the programme ran successfully in the inaugural year, the onset of the pandemic, followed by the closure of schools, presented a formidable challenge. During this time, LLF pivoted successfully to the Har Ghar School Programme which was a testament to the program's agile approach. Under this programme, LLF trained community-based volunteers in teaching-learning practices and equipped them with learning material including workbooks, storybooks, etc. It adopted home-based learning for disadvantaged children, wherein homework was delivered directly through WhatsApp on a platform supported by Rocket Learning. Visits and calls by block coordinators, tracking student learning, volunteer-teacher-run community classes and parental engagement were salient features of this approach. Clearly-delineated outcomes and outstanding results

The Haryana Early Literacy

DIB had clearly defined goals since the outset, with letter fluency per minute, word fluency per minute, oral reading fluency, reading comprehension and word writing being the key metrics for measuring its performance. The results assessed by a third-party, Educational Initiatives, showed that the programme achieved exceptional gains in literacy outcomes, such as 3.5x learning gains over defined targets with all pre-agreed learning targets met. The intervention was able to achieve learning gains of an additional 1.61 years in schooling over business-as-usual schooling (using oral reading fluency as the indicator for the acquisition of foundational literacy skills). When compared with the Global Minimum Proficiency equivalent standard of Oral Reading Fluency for Hindi (as defined in NCERT's Foundational Learning Study 2022), it is seen that 65 per cent of students in the intervention group met or exceeded the Global Minimum Proficiency Standards of being able to read more than 35 words per minute at the end of Grade 2. Approximately 1,64,000 children and 7,500 educators in 3,300 schools in 7 districts of Haryana reaped the benefits of the programme. Compared with similar programmes in Egypt, Nigeria, Kenya, Mali, Uganda, Liberia, Jordan, Tonga, Kyrgyz Republic, Congo Republic, Papua New Guinea and South Africa, its impact was found to be greater than all programmes in these countries. It is also among the top three programmes worldwide in terms of Oral Reading Fluency and Reading Comprehension.

## Way forward

The Haryana Early Literacy DIB programme paved the way for improving foundational learning at scale. The key learnings from the programme have now been adapted by the state government into the state-wide Foundational and Literacy program called NIPUN Haryana. LLF is now closely working with the Haryana Government in all districts to achieve the goals of NIPUN Haryana.

One of the key reasons for Haryana Early Literacy DIB's success was that it was a system-focused government-led intervention which led to implementation at scale. All stakeholders were aligned on a common pre-agreed set of outcomes, which, coupled with data-driven decision-making, helped the programme exceed its targets. Moreover, the programme was spread across several years and followed a flexible funding approach which allowed for mid-course correction.

As nongovernmental organisations explore newer avenues in funding, there is immense potential for harnessing DIB in the development sector, especially in the context of education. Not only does it open a new funding vista, but it can also enhance the state's capacity in Foundational Literacy and Numeracy. DIB can play a pivotal role in ushering in a competitive ethos and result-focused approach in development programmes, and utilising private capital to bridge the financing gap. However, it is often criticised for prioritising short-term gains in learning over larger systemic processes. But if restructured appropriately to support system strengthening and system reforms, it can lead to windfall gains.

The Haryana Early Literacy DIB programme will serve as a benchmark for much larger outcome-based funding in education programmes in the years to come. The public-private partnership model that Language and Learning Foundation has put in place under the inspired leadership of its founder and former IAS officer, Dhir Jhingran, is a wonderful example of Nexus of Good as it can be replicated and scaled.

Views expressed are personal

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As non-governmental organisations explore newer avenues in funding, there is immense potential for harnessing DIB in the development sector

# Career-oriented thinking is must for higher studies



PIYUSH KUMAR

## Career-oriented thinking is essential when preparing your child for studying in the US university

**T**he United States (US) has established itself as one of the top destinations for studying abroad. Universities there have the top QS World University Ranking, attracting more and more Indian students. 12 prestigious American universities are now on the list of the top 20 globally ranked universities. According to the US embassy and consulates in India, the number of student visas issued for Indian citizens broke its all-time high in the fiscal year 2022, at almost 1.25 lakh.

For children going there to study, initially, it may feel overwhelming with respect to settling down in a new country, as the way of living, environment, people, cultures, everything changes. Hence, parents must prepare children well to ensure an enriching academic experience. In view of this, we have listed a few points to consider while preparing to send your child to the US.

**Start early:** It is important to start preparing well in advance. This includes researching schools, programs, and requirements and planning the necessary appli-



cation procedures. Parents can start researching higher education in the US when their kid is in the 10th or 11th standard.

**College is a fresh chapter:** It is crucial to make your child aware that their school life in their home country is one chapter and their college life abroad is a new beginning. Motivate them to be ready to handle unfamiliar situations. It will aid in their personal and professional growth.

**Think outside of the ranks:** Research the schools and programs that interest your child and match their academic and personal goals. Rankings often prioritize certain factors, such as research output or academic reputation, which may not align with your child's goals and needs. It's important to con-

sider factors like program offerings, location, campus culture, extracurricular opportunities, size, academic rigour, and available resources to ensure that it fits your child's individual objectives and requirements.

**Plan for finances:** The cost of tuition and living expenses in the US can be quite high, and parents should be prepared to cover these expenses. It's important to research the cost of living in the area where your child will be studying, including housing, food, transportation, and other expenses, and to plan for finances early on. Parents should research the scholarship, grants, and financial aid opportunities available to their child, both from the university and external sources, and create a budget to cover living expenses accordingly so the child's study abroad experience is financially sustainable. Career-oriented thinking Helping your child to look at the wider picture is one of the best things you can do for them. Career-oriented thinking is essential when preparing your child for studying in the US. By helping them understand the bigger picture

and keeping their ultimate goal in mind, you can mentally prepare them for the upcoming changes. Emphasize the importance of goal setting and being goal-oriented in their decision-making process. Research different schools and courses together, considering the career training and placement services offered by each institution. Consider cultural adjustments: Encourage your child to embrace and enjoy learning about American customs, traditions, social norms, and values as they prepare to study in the US. Training in life skills: Encouraging children to learn life skills when studying in the US can enhance their adaptation and success in their new environment. These skills foster self-sufficiency and independence, including cooking, cleaning, budgeting, and time management. By acquiring these abilities, children gain confidence, control, and resilience to overcome the challenges of relocating to a different country.

*(The writer is Regional Director- South Asia and Mauritius, IDP Education)*

# Learning to qualify

**NEP frameworks overemphasise outcome-based learning while ignoring subjective factors of education**

**NAVNEET SHARMA AND  
FURQAN QAMAR**

**N**EP 2020, rooted in ancient Indian ethos and knowledge systems, aims to make India a Vishwaguru of the knowledge-economy-run modern world with the spirit of 'light but tight' control and regulation. Apparently, it believes that multiple frameworks, even if a few of them are disjointed, would make regulation tighter.

NEP proposes eight 'frameworks' with many sub-frameworks. These are to be developed by the National Council of Educational Research and Training (NCERT), the National Council for Teacher Education (NCTE), the State Council of Educational Research and Training (SCERT), and the General Education Council (GEC). Since the GEC is yet to be born, the National Credit Framework (NCrF) and the National Higher Education Qualification Framework (NHEQF) have been drafted by the University Grants Commission (UGC).

NCTE is charged with the responsibility of developing the National Curriculum Framework for Teachers' Education (NCFTE). SCERTs are told to evolve the School Quality Assessment and Accreditation Framework (SQAACF) to ensure that 'minimal' (?) quality education gets delivered at the school level in their respective states. A good chunk of the envisaged frameworks are to be designed and developed by NCERT. These include the National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE), the National Curriculum Framework for School Education (NCFSE), the Adult Education Qualification Framework (AEQF), and the National Skills Qualification Framework (NSQF). The Open Distance Learning Framework (ODLF) for the school level is also to be developed by NCERT.

These frameworks intend to prescribe the minimum 'learning essentials' for all learners. Liberally mentioned 'outcome-based' approach, and the description of outcomes indicates that education is merely viewed as input for investment into developing human

beings as economic resources. Rhetorically, though, the Ministry of Human Resource Development (MHRD) has been renamed the Ministry of Education.

NCrF has already been circulated by the UGC, which delineates the need for and importance of the credit system in higher education. It is claimed to be a single meta-framework to seamlessly integrate all types and levels of credits earned by students. The document asserts that the policy would be a game changer as it would make education holistic, flexible, modular, and multi-disciplinary. NCrF prescribes the core, compulsory, and optional courses and sets the minimum number of credits that an individual must obtain to become eligible for a particular level of education.



NCrF, together with NHEQF, may bring some clarity to the complexities of the education system in the country. Taken together, the two documents are spread over 160 pages and thus appear quite abridged in comparison to the draft NCFSE, which is elaborate, running into 628 pages. In comparison, NCERT's National Curricular Framework 2005 was limited to 135 pages. Apparently, the present draft does not wish to leave much to the imagination and interpretation of states and schools.

Examination or assessment is not an end in itself; it depends on how we use the results. The draft document seems to overemphasise 'learning' and 'assessment', which appear 961 and 451 times, respectively. The objective and objectivity for knowledge appear so heavy that the document misses the subjectivity and the word 'knower' for the learner alone. The framework is, however, less explicit about how an 'objective' assessment would be done in such subjects as music, fine arts, or skills.

The draft NCFSE suggests that a student will have to take two courses from eight generic curricular areas, that is, sixteen courses in IX and X, to earn a secondary certificate. Besides science, social science, the humanities, mathematics, and computers, these areas will also have physical education, vocational education, the arts, and interdisciplinary courses. So is the case with the theoretical or practicum questions that the test item developers would be expected to construct to account for individual learning and merit in these areas.

Similarly, in classes 11 and 12, out of a minimum of three or four of the above-mentioned curricular areas, a student has to opt for four disciplines to essentially study four courses in each discipline to qualify for a senior secondary certificate. This could be a problem for some, particularly those who choose the combination of physics, chemistry, and biology. They would probably be left with no choice but to opt for courses from two more curricular areas to complete the minimum of three discipline areas. This would make such students study 20 courses instead of 16. With this structure, a learner can select, at most, two disciplines from one curricular area.

Consequently, the emphasis would continue to remain on generic learning rather than deep and broad learning as envisaged by NCFSE. The module for on-demand examination appears progressive and learner-centric, but unless implemented thoughtfully, it may keep learners jittery and on edge throughout the year. The 2021 NCRB data reports reveal that over thirteen thousand students died by suicide in the country. This translates into 35 deaths by suicide a day. This is the highest since 1967. There is little indication that the draft NCFSE would lighten the burden on students and make learning a pleasurable experience.

While it was expected that NCFSE would emphasise learning, assessment, performance, and all-round development of children, it has sadly succumbed to the consumerist and market-driven model of education, which will marginalise them further in the arena of knowing and knowledge construction. Alas! The path to qualifying in such a scenario goes through learning with a marked disdain for knowing.

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# Plea for public funding of higher education

The NEP 2020 endorses a substantial rise in public investment in education, despite its emphasis on enhancing and strengthening the role of the private sector in providing higher education.

## OPINION

FURQAN QAMAR



**T**he new education policy (NEP 2020) laments that the public expenditure on education is “nowhere close to the 6% of GDP, as envisaged by the 1968 policy, reiterated in the policy of 1986, and reaffirmed in the 1992 review of the policy”. It is good that the new policy realises the importance of public provisioning and funding of higher education and pledges that the Centre and states would work together to increase public investment in the education sector to reach the oft-repeated target.

The NEP 2020 feels compelled to unequivocally endorse a substantial increase in public investment in education, despite its emphasis on enhancing and strengthening the role of the private sector in pro-

viding higher education. Speaking in the context of higher education, the NEP 2020 envisaged that it would promote increased access, equity, and inclusion through greater opportunities for outstanding public education. It also assured that the autonomy of public institutions would be backed by adequate public funding.

It may be hoped that this policy prescription would be acted upon urgently. So far, the expenditure on education has remained stagnant as a percentage of Gross Domestic Product (GDP) at 2.9% during 2019-20 to 2022-23. Besides the Education Departments, other Ministries and Departments of the Central and State governments also spend on education. Taking those into account, the expenditure on education works out to be about 4.39% of GDP as of 2019-20 (Budget Estimates).

Expenditure on education as a percentage of the total expenditure of the Centre and States has also declined from 10.7% in

2019-20 to 9.5% in 2022-23. The share of education in social services, at the same time, has nosedived from 42.5% to 33.5%.

Notably, the expenditure on education by the states has risen from 2.94% of GDP in 2010-11 to 3.27% in 2019-20 (BE), while the expenditure on education by the Centre has declined from 1.11% of GDP in 2010-11 to 0.98 in 2018-19, though the revised estimate enhanced it to 1.32% in 2019-20. Considering the criticality of higher education, particularly in the context of the focus on the knowledge economy, it ought to get at least an equal share in the public expenditure on education, a minimum of 2% of GDP.

Against this backdrop, higher education has been the worst victim; the combined expenditure on higher education by the Centre and states has plunged from 0.86% of the GDP in 2010-11 to 0.52% in 2019-20. Worryingly, the Centre's expenditure on higher education has dropped from 0.33% of GDP to 0.16% during the corresponding period. So has been the case with the expenditure on higher education by the states which slid from 0.53% to 0.36% of GDP during the same period.

Education being in the concurrent list of the Con-

stitution is a joint and shared responsibility of the Union and states. Coordination and maintenance of standards in higher education, however, fall squarely under the domain of the Union government. Quite naturally, it is expected to become a role model for the states in terms of quality and funding. Sadly, it falls short of the expectations.

Contrary to the general argument that allocation for higher education is constrained by the availability of funds with the central government, data proves otherwise. Juxtaposing the expenditure on higher education against the revenue receipts as well as the total receipts of the Union government shows that a rise in the receipt is no guarantee for enhanced allocation for higher education.

During 2011-12 to 2022-23, the revenue receipt of the Union government grew from Rs 7.51 lakh crore to Rs 22.04 lakh crore. The total receipts too increased from Rs 13.07 lakh crore to Rs 39.44 lakh crore. Data reveals that the central government's expenditure on higher education, during the same period, slipped from 2.60% of its revenue receipts to 1.85%. As a share of the total receipts as well, the expenditure on higher education declined from 1.49% to 1.04%.

Against this backdrop, the unequivocal commitment of the policy to substantially increase public investment by the Centre and states is not without reasons and justification. The new policy spotlights that the enhanced level of public funding is “extremely critical for achieving high-quality and equitable public education system that is truly needed for India's future economic, social, cultural, intellectual progress and growth”.

Higher education in India is already highly privatized, catering to about two-thirds of the total enrolment. Most private higher educational institutions are run on a self-financed basis, a euphemism for full-cost recovering institutions. Besides, private tendencies have also penetrated deeply into public higher education.

Thrust for resource mobilisation, internal revenue generation, cross-subsidisation, resource-use efficiency, cost-reduction, accelerated cost recovery and enhanced user charges may further exacerbate the trend. The most obvious consequence would be a substantial increase in fees and other charges from students.

The idea that higher education could be funded fully or substantially by the students themselves is

grossly misplaced in the Indian context. The proponent of full cost recovery from students often cite examples of public and private universities in the US.

Its universities, barring a few exceedingly elite ones, recover a maximum of \$10,000 a year. This works out to be one-eighth of the per capita income of the country. India's per capita income is presently Rs 1.70 lakh, one-eighth of which works out to Rs 21,250. Most universities in India recover much more than that from their students.

The nation now aspires to double the Gross Enrolment Ratio (GER) in higher education, raising it from 27.3% at the present to 50% by 2035. Considering the fact that the social and economic elites, the rich and the affluent, have already attained a GER of 100%, the future growth in higher education shall come from what the NEP 2020 prefers to call, the Socially Economically Deprived Groups (SEDG). Would these people be able to afford full-cost recovery from their higher educational institutions?

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# How about introducing critical thinking in academics?

**Sridhar Rajagopalan**  
**questions the exam models based on rote learning that help students score well without mastering concepts**



Imagine a student in Class 8 who is a talented cricket player. Let's call him Ravi. Ravi's sports teacher has told him that if he practices well and sharpens his skills, he has a great chance of making it to the state cricket team. Sincere and hardworking, he practices at least an hour every day and three hours every Saturday and Sunday.

But imagine now that while practising his batting, Ravi is only bowled balls of one type - slow, short pitched and pitched just outside the off stump. Ravi masters playing these kinds of balls! His average score becomes impressive.

But what happens to his overall cricket skills?

For one, his ability to play any other kind of ball - especially the more challenging, faster balls - declines over time. He is not able to adjust to a real-life bowler who varies his line and length continuously.

What are Ravi's chances of making it to the state team?

Students in our Indian school system are like the talented Ravi, but the questions they are posed in various exams are largely of just one type - textbookish, recall based and based on definitions or standard procedures.

Tuition classes in India know this and simply make students repeatedly solve questions similar to the ones at the back of the textbook chapter. The students seem to score extremely well in both school tests and Board Exams. But what happens when these students are given an international test not limited to just these types of questions?

## Rote learning a problem

When Indian students of Class 10 from Tamil Nadu and Himachal Pradesh

were given the PISA (Programme for International Student Assessment) test in 2010, they were stumped by the type of questions they were asked. They were specifically chosen to take the test as they were thought to be among the best in the country.

However, their performance in PISA with a ranking of 72 out of 73 countries in the world - scoring ahead of only Kyrgyzstan, highlighted the problem of rote memorisation in Indian classrooms and how familiar textbookish questions had further deepened the gap in learning with conceptual clarity.

The skills students develop are significantly dependent on the types of questions and projects they are exposed to. Exposing them to rote and recall questions makes even the most hardworking students lose the ability to think critically and creatively.

## Challenge them

On the other hand, if students are exposed to questions unfamiliar in form or context which require them to think critically and deeply, challenge their understanding, require them to synthesise information from

multiple written sources, analyse data or require them to make a case persuasively, they would be able to develop advanced skills that would allow them to navigate the challenges of the future workforce.

For example, when children in Class 8 or 9 are asked about the chemical form of pure steam, they have to think about it before they answer. Most textbooks do not mention any chemical formula for steam, so this is not an easy recall question. Students have to remember that steam is water heated beyond its boiling point and that boiling is a physical change, not a chemical one.

Yet when asked this, more than 50% students of in these classes say that steam does not have a chemical formula!

Questions that are carefully developed and require students to think, develop critical thinking in students. High-quality questions (which some call competency based questions) develop critical thinking skills in students. Our exams at every level need to have more of these types of questions. Research suggests that 40-60% of questions in exams should be of this type.

Many parents share two concerns

one, whether our teachers will be able to develop such questions; and two, if students will score lesser if exams shift from rote-recall questions to understanding and thought-based questions.

The answer: Teachers should be supported both with question banks that aim to evaluate the level of conceptual clarity and understanding and the right training to develop the skill to frame such questions. Then they will be able to rise to the occasion.

The marks, on the other hand, will come down to realistic levels thereby reducing college cut-offs - this will have a positive impact in reducing pressure and stress on students along with shifting the focus to true understanding and critical thinking instead of just scoring marks by memorising.

To emerge as a global powerhouse of knowledge and innovation, India needs individuals equipped with non-routine analytical and interpersonal skills. This will only come from teaching students to think critically and learn with conceptual clarity.

(The author is a co-founder of an ed-tech company)

2023/21/11

# Global collaboration will revolutionise education



**RAJESH KUMAR SINGH**

**International collaboration in New Education Policy (NEP) may change the educational paradigm of the country**



On the one hand, international collaborations in education have been on the rise, and so is the case with India. Such collaborations allow teachers, students, administrators, institutions and universities to compare, exchange and collaborate on a range of emerging educational, scientific, technological and teaching issues and methodologies to create an effective and contemporary system of education to cater to the newer needs of the youth. Such collaborations don't just open up the window to the world-class education system, they also offer a better international, social, cultural, economic and geopolitical understanding to the students, besides generating a sense of empathy and new skill sets in the youth.

It is encouraging that the Government of India has made a number of strides in the recent past. On the one hand, it brought into force the New Education Policy (NEP) to change the educational paradigm of the country, it goes on to collaborate with top institutions and universities of the world to make the educational system competitive enough, on the other. To promote the internationalisation of Indian education, NEP focuses on facilitating research, teaching collaborations and faculty & student exchange programmes with high-quality foreign Institutions. It does encourage high-performing Indian universities to set up campuses in other countries, along with facilitating universities from the top 100 universities in the world to operate in India.

In the process, India has identified 'Skill Benchmarking' as a high-priority area in its foreign engagements. It has either done some kind of collaboration or is in the process of inking it with UAE, Australia, Singapore, Australia, Bahrain, Canada, Germany, Japan, Kingdom of Saudi Arabia, Kuwait, Malaysia, Oman, Qatar, Romania, Singapore, Sweden, the US, UAE and the United Kingdom.

Only recently, Union

Education Minister held a meeting with the US Secretary of Commerce with a focus on forging stronger linkages in the skilling sector. The collaborations aim to strengthen institutional mechanisms for making the Indian skill ecosystem more vibrant as well as for building the workforce of the future with a focus on 3S-Skilling, Start-ups and SMEs. Just a couple of days earlier, India and Australia also signed an ambitious agreement, which will help ease the mobility of students and professionals between the two countries. They also agreed to establish a joint task force for mutual recognition of qualifications, which covers both education and skill qualifications of the two countries and will help facilitate two-way mobility of young people for education and employment purposes.

Earlier, known for its best school education, Finland evinced interest to collaborate with India on the knowledge front. India can benefit from Finland's best practices in ECCE, teacher training, and digital education among others. Finnish Universities may also collaborate with Indian

Higher Education Institutions through joint, dual degrees and twinning programs.

Moreover, research also suggests that those having had their education from international universities are better able to adapt to changes at the fast pace and adapt to the changing realities and circumstances. They find more similarities than differences with students from other parts of the world, hence working effortlessly with them. They are also better prepared to discover new career avenues and opportunities than their counterparts receiving education domestically. International collaboration can be extremely rewarding for schools, especially in less developed and developing countries. India still faces a shortage of quality teachers and teaching methodologies to rise to the occasion. Here, such relations and collaborations may prove highly fruitful, as they allow teachers to learn newer things by questioning their incumbent process, practices and notions, reinvent themselves and adopt new strategies.

*(The writer is a senior journalist)*

# Interactive flat panels in classrooms



**ANINDITA CHOWDHURY**

**T**he Andhra Pradesh government has decided to dispose of the traditional blackboards and instead install interactive flat panels in the 63,000 classrooms by 21 December. The decision is the latest among the educational reforms initiated by the state government, led by chief minister Y S Jagan Mohan Reddy, in order to make the existing government schools digitally equipped.

Another key aspect of educational reforms initiated in AP is the inclusion of artificial intelligence in the school curriculum. On 11 June, the chief minister formed a high-level committee to explore if artificial intelligence, machine learning, chatGPT, and other modern tools can be incorporated into the curriculum.

Right after taking oath, the chief minister took certain revolutionary steps in order to transform the government-run schools in the state, beginning with making English the medium of education instead of Telugu, despite objections from certain quarters. The state government now aims to match the schooling experience with international standards. Advisor to the Andhra Pradesh government, Rajiv Krishna, explained the chief minister's vision vis-à-vis school education.

The "Chief Minister Y S Jagan Mohan Reddy-led YSRCP government has spent a whopping Rs 71,000 crore in the last four years for the education

sector in the state only because he believes that education is the sole medium to uplift society and provide equitable growth opportunities to all", said Rajiv Krishna.

"Our government deeply believes in investing in people and providing adequate resources and opportunities to them so that they can transform the lives of themselves and their families. Hence, investing in education means investing in our future. The chief minister's vision encapsulates providing high-quality education to the students so that they will become leaders, scholars, businessmen, doctors, engineers, lawyers, and teachers, thereby changing the entire socio-economic landscape of the state," he explained.

Krishna pointed out that after coming to power in May 2019, the YSRCP government introduced several schemes to transform school education in the state, such as Nadu-Nedu (school refurbishment), scholarship programmes (Amma Vodi, Vidya Deevana, Jaganna Vidya Kanuka), English-medium education, and digitising the classrooms in the education sector.

The installation of interactive flat panels is the latest initiative of chief minister Y S Jagan Mohan Reddy, aimed at transforming the very face of education in the state. According to government sources, these IFPs are being procured from noted companies like Acer and Samsung. As on 13 June,

IFPs have been installed in as many as 10,000 classrooms across government schools. As per the official timeline, the state government is planning to complete the installation of IFPs in 31,000 classrooms by 12 July and in all 63,000 classrooms by 21 December. A total of 19,19,896 students studying in classes VI to X will benefit from these digital classrooms. These IFP screens are used to play and store audio and video contents and are interactive in nature. While such devices are already in use in a few private and international schools, now all government school-going students will have access to such smart devices.

"IFPs have been found to be more efficient in increasing children's learning and retention. The interactive screen offers engaging audio and visual content that captivates students' attention and makes learning more enjoyable. Students can watch educational videos, listen to audio clips, participate in interactive quizzes, and engage in hands-on activities, catering to different learning styles and preferences, Krishna explained.

Further elaborating, Rajiv Krishna said, "This access to high-quality educational material can significantly enrich their learning experience. It enables students to expand their imagination and think visually. It helps them to expand their horizons."

Another key aspect of the state government's education reforms, would be capacity building for teach-

ers. The state government is currently conducting capacity-building sessions for about 77,000 teachers across all government and government-aided schools in Andhra Pradesh. They are being trained by professors at IITs, IIMs, and other central and state universities. Furthermore, the state government has mandated engineering college students to commit to internships in government schools to assist the teachers.

"Our teachers are being trained globally to adapt themselves to not only teaching with English as the medium of instruction but to the latest teaching practices and knowledge delivery mechanisms. For example, IFP screens in every classroom will make each classroom a virtual library, enabling teachers to access knowledge resources from the most reliable and advanced sources," said Krishna.

Digital classrooms will ensure that knowledge from anywhere in the world can be streamed right to the children, and they will become skilled at handling next-generation technologies, Krishna asserted.

For decades, government school students were denied access to even basic infrastructure like proper desks and toilets. But now the current government has not only provided the resources to children studying in government schools but has also left the private schools far behind with English labs, digital classrooms, projectors, and computers.

## CLASS ACT

# Enter Khanmigo

A new chatbot for school students is engineered to use the Socratic method. Will it help or harm our children? **Natasha Singer** has the story

**T**he sixth graders at Khan Lab School, an independent school with an elementary campus in Palo Alto in the state of California in the US, were working on quadratic equations, graphing functions, Venn diagrams. But when they ran into questions, many did not immediately summon their teacher for help. They used a text box alongside their lessons to request help from Khanmigo, an experimental chatbot tutor that uses artificial intelligence.

The tutoring bot quickly responded to one student, Zaya, by asking her to identify specific data points in a chart. Then Khanmigo coaxed her to use the data points to solve her maths question. "It's very good at walking you through the problem step by step," Zaya said. "Then it congratulates you every time it helps you solve a problem."

Khan Lab School students are among the first schoolchildren in the US to try out experimental conversational chatbots that aim to simulate one-on-one human tutoring.

Based on AI models underlying chatbots like ChatGPT, these automated study aids could usher in a profound shift in classroom teaching and learning. Simulated tutors could make it easier for many self-directed students to hone their skills, delve deeper into topics that interest them or tackle new subjects at their own pace. Such unproven automated tutoring systems could also make errors, foster cheating, diminish the role of teachers or hinder critical thinking in schools. Or, like a legion of promising tech tools before them, the bots may simply do little to improve academic outcomes.

Khanmigo is among the wave of new AI-powered learning tools. It was developed by Khan Academy, a nonprofit education giant whose video tutorials and practice problems have been used



ISTOCK.COM/ANNANDISTOCK

by tens of millions of students.

Sal Khan, the founder of Khan Academy — and of Khan Lab School, a separate nonprofit organisation — said he hoped the chatbot would democratise student access to individualised tutoring. He also said it could greatly help teachers with tasks like lesson planning, freeing them up to spend more time with their students.

Khan Academy developed the bot with guardrails for schools, Khan said. These include a monitoring system that is designed to alert teachers if students using Khanmigo seem fixated on issues like self-harm.

**T**housands of US schools already use analytical AI tools like plagiarism-detection systems and adaptive learning apps that are designed to automatically adjust lessons to students' reading levels. But proponents envision the new AI-assisted tutoring systems as education game changers because they act more like

student collaborators than inert pieces of software. The AI's facility with language has prompted some enthusiasts to declare that simulated tutors could soon be as individually responsive to students as human tutors.

Whether the bots can provide the kind of empathetic support and genuine encouragement that can make human tutors especially effective is not yet known.

Khan Academy began developing chatbot tutoring software last fall with the aim of assessing AI's potential to improve learning. The system uses GPT-4, a large language model created by OpenAI, the lab behind ChatGPT.

Khan said he wanted to create a system to help guide students, rather than simply hand them answers. So developers at Khan Academy engineered Khanmigo to use the Socratic method. It often asks students to explain their thinking as a way of nudging them to solve their own questions.

Khanmigo offers help on a broad

variety of subjects: elementary school maths, middle school American history, high school civics and college-level organic chemistry. It also has features that invite students to chat with fictional characters like Winnie-the-Pooh or simulated historical figures such as Marie Curie.

**A**I systems based on large language models can also concoct false information. That is because the models are engineered to predict the next word in a sequence. They do not stick to facts.

To improve Khanmigo's accuracy in maths, developers at Khan Academy created a multistep process: the system works out answers to a maths problem behind the scenes and then checks it against a student's answer. Even so, the Khan Academy tutoring system displays a warning at the bottom of the screen: "Khanmigo makes mistakes sometimes."

Khan Lab School, where annual tuition costs more than \$30,000, offers an ideal test bed for tutoring bots. The Silicon Valley school has small classes and an entrepreneurial philosophy encouraging children to pursue their passions and learn at their own pace. Its tech-savvy students are accustomed to tinkering with digital tools.

One morning this spring, Jaclyn Major, a STEM specialist at Khan's elementary school, looked on as her students playfully tested the bot's limits. One student asked Khanmigo to explain a maths problem using song lyrics. Another requested maths help in "Gen Z slang". "Will you do me one more favour and explain everything in Korean?" a third said in a text conversation with the chatbot. Khanmigo dutifully obliged. Then it nudged each student back to the maths task at hand.

td/27/NTNS

# Science, humanities and the market forces



AVIJIT PATRA  
SOCIOLOGIST

ical/engineering colleges.

While going through the magazine, I read an article titled 'The Science of Learning Arts'. It celebrates the fact that IITs are expanding their humanities and social science programmes. Is it a consolation prize for humanities, I wondered. Is it like saying that arts and humanities can be saved only if engineering colleges ask their students to opt for an optional course — and, that too, causally — in social psychology or English literature?

In a way, I began to reflect on the possible consequences of this sort of economics and politics of education.

In this context, there are three issues that deserve our attention. First, when science is valued primarily for the market-driven instrumental interests, it causes much damage. Science should not be seen as just a technical skill which, as yet another ad proudly declares, is supported by 'key knowledge partners like Infosys and Microsoft', and a means to be recruited by 'Google, HCL, Amazon and Sony'. Have we forgotten that science is also about, as philosopher Karl Popper articulated beautifully, 'conjectures and refutations' — or, a method of enquiry that helps us to grow through continual debates, interrogation and critical reflection. And this critical spirit of sci-



**IMPERATIVE:** We need humane, sensitive and compassionate learners. *pn*

ence, to use Popper's words, nurtures the foundations of an open and democratic society. However, when the logic of neo-liberalism assumes that nothing is more valuable than what the market dictates, and the cherished orthodoxy of religious nationalism negates critical thinking, is there anyone to bother about the democratic spirit of science Popper was talking about?

'I study science solely because I want to be a computer engineer, get recruited by Google, and earn money' — if this sort of logic invades the consciousness of young students and shapes the strategy of education shops, it will not be difficult to find technologically

It's high time we  
acquired courage  
to say no to vulgar  
commodification  
of education.

skilled but culturally impoverished people living 'comfortably' with social conservatism, market fundamentalism, religious nationalism and even political authoritarianism. Even our much-hyped IITs — while producing the skilled workforce for the global neoliberal market — cannot be free from this malady: Techniques and market rationality triumph; critical thinking or political sensitivity declines. We, therefore, must rethink science, and save it from this sort of ugly colonisation by the market.

Second, the order of precedence we have created, ranking techno-science high above liberal arts and humanities, needs to be

challenged. If we systematically devalue arts, social sciences and humanities, or reduce these subjects as just 'soft' options for UPSC aspirants, we will rob young minds of what Jurgen Habermas would have characterised as 'hermeneutic' and 'emancipatory' interests. To take a simple illustration, when you are encouraged to meditate on, say, a poem by Pablo Neruda, a film by Charlie Chaplin, a novel by Rabindranath Tagore, or critical reflections on culture, politics and economy by the likes of Karl Marx and Sigmund Freud, you sharpen a profound art of seeing and relating to the world; you become a sensitive and critical wanderer; and you learn the nuanced mode of conversations to live meaningfully as an awakened citizen in a heterogeneous and democratic society. In one of her amazing books, Martha Nussbaum has reminded us that not everything is for profit, and hence, why 'democracy needs the humanities'.

And third, we cannot fight the prevalent pathology of education without a pedagogic revolution. From elementary schools to universities, the culture of learning ought to be enriched and humanised by this revolution. Don't forget that modern scientism with its 'iron laws', 'objectivism' and epistemological arrogance has often devalued

the entire domain of poetry, literature and philosophy as mere 'subjective' narratives without solid empirical foundations. It is like saying that while science monopolises 'truth', all other narratives are just 'stories'. This sort of duality ought to be overcome through an integrated and holistic approach to education. This will lead to the humanisation of science and technology. Imagine a doctor who has internalised Ivan Illich and Gandhi with intense sincerity. She will possibly hesitate to reduce a health centre to a gorgeous shop, and, instead, resist all sorts of malpractices that go on in the name of 'diagnostic technology'. Imagine an environmental scientist who has studied and celebrated Thoreau's, or for that matter, Tagore's ways of looking at life, nature and human needs. He will possibly raise his voice against the ongoing onslaught on mother Earth in the name of neo-liberal techno-developmentalism.

We need humane, sensitive and compassionate learners and politically aware/culturally enriched citizens — not one-dimensional ones who are eternally restless about what an education shop promises — 'Rs 38 lakh per annum and thousands of placements.' It's high time we acquired the courage to say 'no' to this sort of vulgar commodification of education.

## STUDENTS EXPELLED. TEACHERS SUSPENDED

## Whose loss is it?

In New India, universities don't tolerate 'activist' students who ask for scholarship enhancement. Oxford University does, with a generous scholarship

APOORVANAND

**B**himraj M, a student expelled by the South Asia University, has got admission to Oxford University with a scholarship. Why should it be an event? His admission has acquired significance only because of his expulsion from the SAU. Would we then like to know why a bright scholar like him was expelled by his university and what happened after that?

Then it should also be possible for us to remember that four teachers at the same university have been suspended for more than a week. Their suspension is related to the expulsion of Bhimraj. This fact has been reported by online media, and some newspapers also took note of it, but then it disappeared from public discussion.

It should be a matter of concern for us that teachers are being punished for speaking to the university authorities about their humane attitude towards the students. The university administration considers this request of the teachers an act of incitement against the administration. For this 'crime', the teachers have been punished.

But why did the teachers have to speak? Since September 2022, the students have been agitating against the sudden cut in scholarships. According to them, the scholarship needed to be increased, taking into account the rising inflation, but it was reduced. They were also demanding representation of students in the statutory committees of the university. Especially in committees dealing with gender and sexual harassment. Not an illegitimate demand. Other public universities do have student representation on at least these two committees.

When they were not heeded, the students did picketing and gherao. The administration called the police. After this, 13 teachers wrote to the administration that they should have refrained from calling the police to the campus, also because the university is international. After that, many teachers met with the officials to diffuse the situation. Instead of listening to them, the administration punished five students in different ways. Punishments ranging from suspension to cancellation of ad-

mission were given to them. The teachers again met with the administration and urged them to start a dialogue with the students. When nothing happened, the students again started a fast, which later turned into a fast unto death. Some of them became very ill, and one, Ammar, was so affected that he had to be hospitalised several times. Angered by his deteriorating condition, the students went to the registrar's room and said that the administration should visit him and that arrangements should be made for his treatment. The hunger strike continued. The administration then withdrew its order punishing the students but issued fresh show-cause notices. Also, two students, Umesh

refused and threatened that refusing to obey would also be treated as evidence against him.

This high-level committee also had senior teachers as members. But they did not hesitate to behave in this manner with their colleagues. The teachers then wrote to the president of the university. In response to that report, the administration suspended Snehashish Bhattacharya, Srinivas Burra, Irfanullah Farooqi, and Ravi Kumar.

This whole incident shows how insensitive the attitude of the administration is. It has no respect for the dignity of any of the students or teachers.

There are other teachers in the university, just as there are other students besides the agitating students and the teachers suffering punishment. These teachers could also have lived a quieter life. Is it not their duty to just go to the class and get the syllabus completed? Why did they need to engage in activism? But these teachers did what they felt was their duty. The university rests on the reciprocity of teachers and students. Irrespective of the physical, mental, or psychological condition of the students, it is easy to keep lecturing in the class, but is it appropriate?

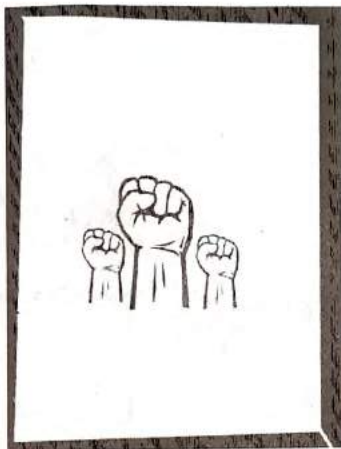
What could be more ironic than a class lecture on the relationship between power and injustice while students are sitting on a fast unto death?

The tendency to discipline teachers is getting stronger in India. Just as I am writing this, I read that the Presidency University in Kolkata has issued a code of conduct for teachers and students. Prior to that, many of the central universities had implemented codes of conduct to restrain teachers by implementing the civil service code of conduct for them. Efforts are being made to outlaw their speaking, writing, and public activism.

Forty-eight teachers at Jawaharlal Nehru University are currently fighting a legal battle against similar disciplinary action. Professor Sonya Surbhi Gupta of Jamia Millia Islamia has been suspended for her involvement in the activities of the teachers union. There is no public memory of these acts.

Universities are known to come alive with teachers and students. But here, efforts are being made to reduce them to the status of mere government employees. It is expected that they should consider themselves subordinates to the administration and obey their orders.

After the action against the students and teachers at 'South Asia University', once again it has become necessary to talk about the relationship between the university, students, and teachers. Our indifference would mean death for independent voices on campus. 20/6/23



Joshi and Bhimraj, were expelled from the university.

Bhimraj is the one who is now making news for having been selected by Oxford University for a research course. He was demanding an increase in scholarship, for which he was penalised. Now he has been given a full scholarship by Oxford to pursue his studies.

The agitation ended in December, but at the end of the month, the administration issued show-cause notices to four teachers. They were accused of supporting the students' agitation, instigating them, visiting sick Ammar in the hospital, and writing letters to the administration. It was also alleged that some of them had links with a Marxist study circle on campus.

After this, a high-level fact-finding committee was constituted, and the accused teachers were asked to appear before it. When they reached the room, each was given a booklet. Containing questions (numbering 132 to 246) to be answered by the accused teachers. They were ordered to sit there and write the answers with a pen. This method of fact-finding shocked them. They naturally felt humiliated. They objected to it and asked for questions to be shared electronically. The committee

# Ahead of the curve

*During the last nine years, the Indian government has taken massive strides in all sectors, including education, to take the nation on a transformative trail*



SUBHAS SARKAR

As the Modi Government completes nine years in office, we stand at the precipice of a landmark era. India's aspiration to assume its rightful place as a great power required some big changes, and the 9 years of the Modi government are a testament to a new era of growth and development.

A fundamental shift in the governance under Prime Minister Modi's leadership has not only yielded results but also changed people's perception about government institutions. The last nine years in office have been full of new challenges that were overcome with strong political will and decisive leadership. Countries across the globe had to undergo a tectonic shift in the way they operate after the Covid-19 pandemic, and India showed the world how to convert calamities into opportunities and what it means to be truly anti-fragile.

Since 2014, India has prospered in the sector of physical infrastructure, ranging from the unrecognisable makeover of the Indian roadways to metros, 6 kilometres in length being added every month, 74 new airports set up, flagging of Vande Bharats across the nation. Connectivity is no longer a distant utopian wish but a reality. 31.36 crore households now have access to LPG connections under the Ujjwala Scheme. Under the Swachh Bharat Mission Gramin - SBM(G), a total of 11.14 crore Individual Household Latrines and 2.23 lakh Community Sanitary Complexes have been constructed in India since its launch on October 2, 2014.

The Ayushman Bharat Digital Mission is realising the vision of building a digitally connected healthcare ecosystem. Over 25 crore health records of individuals have been linked to their Ayushman Bharat Health



NEP has laid the foundation for a holistic and inclusive education system

accounts. Over 5.65 crore mothers and children have been protected by Mission Indradhanush, with over 15 crore teleconsultations through Health Wellness Centres. 15 new AIIMS and 225 medical colleges have been added, with a total of 69,663 medical seats added since 2014. Approximately 4 crore rural and urban houses have been constructed under the PM Awas Yojana. 11.88 crore households now have tap water connections as on march 2023.

By 2030, it is expected that India will have the greatest population of young people in the world. If we are to optimise this potential, we must create an adept workforce to face all the changes and developments the world undergoes.

One of the key focus areas of the government has been education. With a vision to empower the nation's youth and provide them with quality education, the government has implemented numerous initiatives to revamp the education landscape. One of the major steps taken by the government to achieve this is the introduction of the first major overhaul in the educational policy after 34 years, by bringing in the National Educational Policy (NEP) 2020.

The NEP 2020 has brought about a transformative wave in the education sector. This landmark policy has recognised the

crucial need for reform and has laid the foundation for a holistic and inclusive education system. One of the key aspects of NEP 2020 is the shift towards a multidisciplinary approach, emphasising the integration of arts, sciences, and vocational subjects. It also focuses on promoting critical thinking, creativity, and problem-solving skills among students. Another significant aspect is the emphasis on early childhood care and education. NEP 2020 also aims to reduce the burden of exams and rote learning. Moreover, it promotes the use of technology in education and aims to bridge the digital divide among students.

Teacher training will be a major focus as well. It is of absolute importance that we provide the resources to enhance the existing skill sets of teachers, to rise to the challenges posed by a changing world. Teacher preparation is an activity that requires multidisciplinary perspectives and knowledge, the formation of dispositions and values, and the development of practice under the best mentors. Teachers must be grounded in Indian values, languages, knowledge, ethos, and traditions including tribal traditions, while also being well-versed in the latest advances in education and pedagogy.

The Rashtriya Uchchatar Shiksha Abhiyan (RUSA) and the Samagra Shiksha scheme have

played a crucial role in providing funds for the construction and upgradation of schools, colleges, and universities. These initiatives have focused on improving classroom infrastructure, including the provision of libraries, laboratories, and ICT facilities. The efforts to enhance infrastructure have created a conducive learning environment and positively impacted the educational experience of students.

To foster research and innovation in the field of education, the Modi government has launched various initiatives such as the IMPRINT (Impacting Research, Innovation, and Technology) India program, the Prime Minister's Research Fellowship (PMRF) scheme, and the Atal Innovation Mission. These programs aim to promote research collaboration between academia and industry, support innovation-driven startups, and encourage scientific and technological advancements. The emphasis on research and innovation has nurtured a culture of curiosity and critical thinking among students and educators.

The Digital India campaign, launched in 2015, has played a pivotal role in revolutionising education by promoting digital learning and technology integration in schools and universities. Under this initiative, the government has implemented several measures to enhance digital infrastructure, Internet connectivity, and e-learning platforms across the country.

The Digital India campaign has facilitated access to quality educational resources, including online courses, digital libraries, and interactive learning tools, thereby democratising education for students in remote areas. The increased availability of digital resources has also supported teachers in delivering engaging lessons and fostering interactive

learning experiences, especially in the post covid world.

The nine-year tenure of Prime Minister Narendra Modi's government has witnessed significant progress and positive developments in the field of education in India. Through initiatives such as Skill India, Digital India, Start-up India, Stand-up India and investments in infrastructure and research, the government has strived to empower youth, bridge educational gaps, and promote inclusive and quality education. These efforts have not only improved access to education but also fostered skill development, digital literacy, and gender equality. As India continues on its path of growth and development, the education reforms implemented under the Modi government have laid a solid foundation for a more prosperous and knowledge-driven future. There is no doubt in saying that India is one of the fastest growing economies of the world and we have come a long way already with the government's people-centric and pro-development policies. But this is just the beginning of the golden era of India as we just entered the 'Amrit Kaal' and the next 25 years is the time for India to shine and show the path for the rest of the world.

All of this talk of change makes me feel immensely optimistic about the future of our nation. At this pace, India at 100 will be a sight for the world to see, a force to reckon with. The future is ours for the taking, if only we are brave enough to dream of it, and persistent enough to work towards it. However, getting somewhere requires a plan and appropriate actions, and in that respect, under the leadership of Hon'ble Prime Minister, we are well on our way to achieving this milestone of Vikasit Bharat.

*Views expressed are personal*

A beginning of India's golden era was made as we entered the 'Amrit Kaal'. In the next 25 years, India will shine and show the path for the rest of the world

# Rural girls are yet to attain computer literacy

Many schools in rural areas have computer infrastructure, but it is often insufficient to provide proper computer education to the students, especially girls

In today's era of advanced technology, where Artificial Intelligence (AI) and digital innovations are transforming lives, it is disheartening to acknowledge that several remote villages in India still lag behind, lacking even the most basic digital literacy. Talking about remote hilly villages in Uttarakhand, the privilege of knowledge and access to digital literacy still remains elusive, especially for girls. One such village is Selani, located in the Garur block of Uttarakhand, where Kumari Mamta, an adolescent girl, faces numerous challenges in accessing computers.

Mamta travels a distance of 27 kilometres from Selani to Baijnath in Garur block to access the Common Service



JANKI DOSAD

*(The writer is a student in BA first year from Selani village in Bageshwar, Uttarakhand)*

Centres (CSC), which serve as the primary delivery points for e-services. Due to the absence of computers in her own school and village, Mamta must rely on the CSC to fill out any applications related to education or scholarships. However, due to her lack of computer skills, Mamta and her friends find themselves dependent on the distant CSC for their basic needs.

Mamta lamented, "In order to have computers in our village, we first need a reliable network. Currently, even filling out a simple form for college or other courses requires us to travel long distances. Unfortunately, we often miss deadlines due to lack of information or money to cover travel expenses. After

completing higher secondary education, the career options for girls diminish significantly as we are not provided with computer education. Furthermore, we do not have any facilities nearby to access digital services and learn. Consequently, girls are frequently compelled into early marriages, with limited choices available to them."

Lack of access to computers may seem like a minor problem, but its impact on people's lives, particularly girls living in rural areas, is significant. Acquiring basic computer skills can empower these girls, providing them with access to knowledge that allows them to make informed decisions. Moreover, computer literacy opens up opportunities for

employment once they have completed their education.

According to a recent report, digital literacy rates among women in India are significantly lower compared to men, with only 23% of women being digitally literate compared to 59% of men. One of the primary reasons for this disparity is the lack of access to digital infrastructure and opportunities, particularly in close proximity to where girls live. As a result, they are unable to acquire the necessary skills and knowledge in this field, leading to the mentioned data.

Sangeeta Devi, a mother of an adolescent girl from the village, highlights the challenges faced by girls in pursuing digital literacy. "Due to safety concerns, it is not fea-

sible to send girls from the village to the towns for computer classes. However, establishing a computer centre within the village would greatly facilitate their learning process. This would provide a convenient and safe environment for girls to access digital education, empowering them with valuable skills for the future," Sangeeta shared.

Kumari Asha Dosad, another teenager from the village, expressed her frustration about the current situation. "It has been two years since I completed 12th grade, and I find myself sitting at home with no prospects for the future," lamented Asha. Like many others, Asha aspires to achieve something meaningful in her life, but she can't see

any way forward. She understands that computers can be powerful tools for acquiring knowledge, but unfortunately, she and her fellow villagers have no means to access this valuable resource. Despite their strong desires, they have been unable to accomplish anything due to the lack of opportunities.

Neelam Grundy, a development practitioner from the region, similarly highlights the significance of digital literacy for adolescent girls. She believes that it is crucial for them to possess this skill set as it empowers them and makes them self-reliant. "While women and girls in cities have multiple opportunities for self-reliance, those in rural areas rarely have such prospects.

Several factors contribute to this disparity, including the lack of educational opportunities, gender-based discrimination, and the absence of free and accessible computer literacy programs. Consequently, girls in rural areas are deprived of holistic development," expressed Neelam.

Many schools in rural areas have computer infrastructure, but it is often insufficient to provide classes to the students. As a result, some students, who have the facilities and consent from parents can acquire the knowledge by going to centres in the towns. While the rest who lack such privileges remain entrenched in an unyielding cycle of adversity.

# Metaverse opens new avenues for children

**MANYA ROONGTA**

From the beginning of civilization, India has been a land of various cultures, religions, and so on, all of which have been impacted by the nation's vision and art. Though the history of Indian art can be traced back to the third millennium BCE, the importance of art experience in our culture is more prevalent than ever. However, as we have progressed into the new era, technological improvements have not only influenced people's personal and professional lives but also the realm of art.

In this context, among other new-age technologies, the "metaverse" evolved as a gateway for young children to present their creativity, examine others' skills, and be inspired by it in an immersive and gamified world. Indeed, technology has altered the way humans design art, from hand-drawn paintings to computer-generated artwork. Thus, it is safe to say that the metaverse art experience has truly opened up new paths for young children, giving them unique chances to explore, create, and engage with art in virtual worlds.

## **METaverse: AN UNDERSTANDING AND EXPERIENCE**

What seemed to be far-fetched a few years ago is now becoming reality. With the advent of AR/VR in the art world, digital art has become the new normal. According to Forbes, the metaverse will be one of the top trends in 2023; by 2024, the metaverse market is expected to expand by \$72.8 billion. The report further highlighted that due to the increasing adoption of the metaverse, industries such as education, art, retail, gaming, and so on have adopted it in order to define their position in today's competitive environment.

Metaverse is a computer-generated virtual world in which users can communicate with one another by creating their own avatars. These avatars are 3D representations of people who use the platform to engage with others and share their experiences. The metaverse has introduced ground-breaking platforms for artists to develop their unique art, helping them gain more access to a whole new



audience group beyond the typical constraints of the art world.

Here are some key features contributed to boost Art Experience in the Metaverse:

### **GAMIFIED AND COLLABORATIVE NATURE:**

Given the changing nature of creative education, the dawn of the metaverse has emerged as a practical amalgamation for combining art and entertainment, attracting a larger audience to engage in artistic activities. Moreover, young individuals can unleash their creativity by actively taking part in the process of art creation. Utilizing virtual tools, they can enjoy themselves while drawing, painting, sculpting, and composing within virtual environments. Additionally, the metaverse encourages collaboration and customization, enabling students to work together on artistic ventures, exchange ideas, and learn from each other in real time.

### **IMMERSIVE AND ENGAGING LEARNING:**

The metaverse provides a heightened level of engagement, enabling users to achieve greater results with their endeavors. Within this field, numerous art institutions have emerged, featuring themes from India, offering users intimate engagement. Through the metaverse, children are provided with Immersive and interac-

tive art experiences, granting them access to virtual worlds where they can interact with art within three-dimensional settings. They can explore virtual galleries, observe artworks from different angles, and even modify the artwork itself. This interactive involvement fosters a stronger connection with the art and enhances the learning experience.

**Accessible and Inclusive:** In the Metaverse, art experiences often come with educational materials and guided tours, providing children with opportunities to expand their knowledge and understanding of art. They can delve deeper into artworks, artist profiles, historical contexts, and artistic techniques, thereby enhancing their understanding while strengthening their respect for art. Additionally, the Metaverse opens doors for young artists from diverse backgrounds and locations to access art experiences that might otherwise be inaccessible to them, inculcating a culture of diversity and inclusivity. They can engage with art from esteemed museums, galleries, and artists around the globe without traveling, making art education more

democratized.

## **METaverse: PAVING THE WAY FOR YOUNG STUDENT**

It is certainly true that the occurrence of the metaverse has not only pushed boundaries but has also opened up numerous opportunities for young artists to experiment with new forms of art that would otherwise be impossible to create in the physical world. As the metaverse provides social areas for young art aficionados, artists, and educators, children can interact with one another. They can participate in virtual art communities, virtual events, and art conversations. The events develop a sense of belonging and community by allowing children to share their love of art with others from all around the world. As a result, it is safe to say that the art experience in the Metaverse has given young children unparalleled chances to interact with art, express their creativity, learn from each other as well as established artists, and contribute in virtual environments.

The author co-founder, children's Art Museum of India

# Leveraging SaaS technology to enhance personalised learning

RS MAAN

The Indian educational landscape has been witnessing revolutionary changes, and SaaS (software as a service) has a pivotal role to play in the same. It is responsible for taking learning beyond the physical boundaries of educational institutions and changing the way students learn. According to research by IMARC Group, India's e-learning market stood at US\$ 6.4 billion in 2022 and is further anticipated to reach US\$ 14.1 billion by 2028, with a CAGR of 13.7 per cent.

One significant aspect that it has facilitated and enhanced is personalised learning, which has not only further increased student engagement but also sparked the motivation for quality learning. SaaS has emerged as a powerful tool, empowering educational institutions and educators to deliver personalised & tailored educational experiences to students.

## ACCESSIBLE EDUCATIONAL RESOURCES

SaaS has aided educators in moving teaching and learning online as opposed to the traditional classroom-based model where students take classes in-person, engage in conversations, finish assignments, and take tests in a real classroom. With educational resources and tools online on a cloud platform, the need for physical textbooks has been eliminated and it enables students to access the learning material in a hassle-free manner. Now students are able to acquire all the necessary educational material with a smart device/laptop & internet connection, and they are able to access quality education even from a remote place. This mere improvement in accessibility has enhanced personalised learning as students can complete their courses or study a subject without any limitations or time constraints.

## FACILITATES ADAPTIVE LEARNING

In order to succeed, students learn

at varying rates and need personalised help from their teachers. Depending on each child's needs, the level and pace of help needs to change. In this regard, SaaS-based solutions have helped to cater to the personalised learning needs of the students in terms of facilitating adaptive learning. It includes delivering tailored learning content to each student based on their individual needs & pace. The adaptive learning platforms are embedded with data analytics which tracks the performance, strengths and weaknesses of a student and then devises a learning path that resonates with them efficiently. Within the practice of effective adaptive learning, all students experience the same high quality set out by the teachers, with different layers of support, which helps them make good progress over time.

## ENGAGING LEARNING EXPERIENCES

With a myriad of changes happening in the education system, engaging students in the learning process has become critical to improve their focus while motivating them to engage in higher-level critical thinking. In this

regard, educational institutions can make use of SaaS to raise student involvement opportunities, which will ultimately enable everyone to successfully complete the course's learning goals. It allows educators to create interactive and engaging content, thus transforming the learning experience for students. Traditional textbooks are often limited in their ability to captivate students and promote active learning. However, SaaS platforms offer multimedia-rich content, including videos, animations, and simulations, making learning more immersive & enjoyable.

## ALL THINGS CONSIDERED

Technology has influenced all aspects of the education landscape and

the educational institutions, teachers and students have welcomed it with open arms. With advantages such as facilitating remote education, and making learning affordable for students residing in remote areas, the benefits of technological advancements cannot be undermined. In this regard, SaaS technology has been further transforming personalised learning by making educational resources accessible, facilitating adaptive learning and providing engaging learning experiences. As India continues its journey towards a full-fledged digital future, SaaS will be the catalyst that will help the education sector to achieve new heights.

The author is managing director and global CRO, Codileo



# Cos can deploy AI to improve talent retention, boost output

By M Muneer

We know that artificial intelligence (AI) can help automate repetitive tasks, analyse data, and make predictions, allowing HR to make more informed decisions. The assumption is that HR can focus more on higher-value tasks such as talent development and job redesign.

One area where I see a significant dose of AI infusion is employee engagement. AI tools analyse employee data such as survey responses and social

media activity to gain insights into what motivates employees and suggest ways to keep them engaged. This transforms into improved job satisfaction, higher retention rates, and a more productive workforce.

Another area that can have a big impact is the recruitment process. AI automates the talent-acquisition process by screening resumes & candidates, and conducting initial interviews. This will reduce the risk of human bias, cut recruitment time and costs, as I have seen with humanoids and vi-

deo AI platforms that can perform all such tasks with great accuracy. These can interview tens of thousands of candidates simultaneously and at the times preferred by candidates.

Performance management is another key area ripe for transformation. AI can track employee performance and provide feedback in real time. This will help identify areas of improvement and provide personalised learning and development (L&D) guidelines. The natural extension of this is into employee engage-

ment processes. For instance, use AI to predict which employees are likely to leave and suggest customised interventions to improve retention.

There are various AI tools available for HR today. Applicant-tracking systems are useful to scan resumes and match candidates to job descriptions, cutting down filtering time. Video-interviewing platforms provide insights on candidate personality, communication skills, and emotional intelligence.



HR chatbots use natural language processing and machine learning algorithms to provide quick answers to employees.

Employee-engagement tools analyse data to identify potential issues and recommend solutions. Predictive analytics project future outcomes such as employee turnover and help make data-driven decisions. Diversity and inclusion tools analyse hiring and promotion data to identify potential biases and recom-

mend ways to improve.

While all these are music to CHROs' ears, there are cacophonies too. First is the bias that AI algorithms could carry—they are only as unbiased as the data they are trained on. This can lead to unintentional discrimination in hiring and performance evaluations. Second is the lack of transparency. Some AI algorithms are complex and opaque, leading to difficulty in understanding how they make their conclusions. This can be a problem when HR ne-

eds to explain their decisions to stakeholders. Third is data privacy/security. HR needs to protect employee data and ensure that it's used responsibly and ethically. Fourth is the possibility of getting enslaved to AI—use it as a powerful tool, but don't allow it to replace human judgment.

Here are some best practices CHROs may consider

while infusing AI:

- ▶ Define clear objectives
- ▶ Ensure data quality
- ▶ Evaluate AI vendors
- ▶ Ensure transparency
- ▶ Address biases
- ▶ Use AI to complement human expertise
- ▶ Invest in training
- ▶ Monitor and evaluate

*(The writer is co-founder of Medici Institute)*

# Prof PC Mahalanobis and National Statistics Day

## ■ Prof Jiten Hazarika

he word 'statistics' refers to an academic discipline and a set of practices that aim to convert data into meaningful, actionable information about the real world, particularly in the presence of uncertainties. On the other hand, 'statistic' (singular) refers to a numerical summary of data, such as median, mean, mode, etc. But the word 'data' means a series of measurements or observations – usually in numerical form, but not necessarily – of some phenomenon. Thus, the words 'data' and 'statistics' mean two different things. For the general public, the two words are nearly synonymous, and most people would have difficulty in explaining the difference between them. The confusion is very important, because it leads to a lack of understanding of or appreciation for what statisticians do. Statistics may be considered as a profession that is built on data, but it is more than data.

The data should be collected with a purpose. Attention should be paid to identifying confounding factors and removing systematic sources of bias. When conclusions are drawn, they should be presented in a way that acknowledges the uncertainty and estimates its size. When all of these ingredients are present, whether the context is economics or biology or web commerce, it could

be affirmed conclusively that "statisticians were here".

The Indian statistical system is a source of immense pride in so far as it measures up to the best in the world in terms of its quality and openness, and this characteristic raises the stature of our country at the global level to a significant extent. Foreign governments and agencies are interested in our country not due to the availability of data but on account of its "reliability and transparency", which are now regarded as important indicators of good governance.

The development and propagation of the Indian statistical system did not happen overnight, or by some happy accident. It owes an enormous debt of gratitude to its founding father and long-time mentor, Professor Prasanta Chandra Mahalanobis (1893-1972). India's leading position among the developing countries in statistical system owes a lot to his contributions. Research in the theory and applications of statistics as a new scientific discipline began in India in the early 1920s through his pioneering initiative and efforts. He was originally a man of physics. After completing school education from the Brahmo Boys' School in Calcutta (now Kolkata), he went to Presidency College from where he received a BSc degree in physics. In 1915, he took a trip

degree from King's College, Cambridge. When he was approached by a fellow named Macaulay at the library of King's College for his opinion on some volumes of *Biometrika* (a famous research journal of application of statistics), edited by Karl Pearson, he bought the entire set of *Biometrika* that was then published and brought them along with him to India. This was the beginning of Prof Mahalanobis's life-long fascination with statistics. Soon after his return from Cambridge, he began carrying out statistical research with the help of some part-time assistants. The first scientific paper by him was on the statistical analysis of the stature of Anglo-Indian males of Calcutta. This was followed by further research in anthropometry, meteorology and in problems of flood control in north Bengal and Orissa.

A non-government and non-profit institution, the Indian Statistical Institute (ISI) was recognised in the year 1932, under the Societies' Registration Act No XXI of 1860. Under the remarkable leadership of Prof Mahalanobis as founder (honorary) Secretary of the ISI, the institute grew into an all-India organisation. The institute has its headquarters in Kolkata and two other centres in Delhi and Bangalore, and a branch at Giridih. In addition, it has a network of service units of the Statistical Quality Control and Operations Research Division in Baroda, Mumbai, Pune, Coimbatore, Chen-

nai, Hyderabad, Kolkata, Delhi and Bangalore. Very recently, it also set up a branch having a diploma programme in Tezpur. Motivated by the *Biometrika*, Prof Mahalanobis started a new journal in statistics called *Sankhya* as its editor in the year 1933. The journal received instant international recognition, and continues till today. He established a division within the ISI called the National Sample Survey (NSS). The NSS grew quickly into an agency noted for its use of continuing sample surveys for the collection of socio-economic and demographic data that covered the whole country. The famous statistician Harold Hotelling commented on these sample survey techniques as, "No technique of random sample has, so far as I can find, been developed in the United States or elsewhere, which can compare in accuracy with that described by Professor Mahalanobis." Also, Sir RA Fisher commented, "The ISI has taken the lead in the original development of the technique of sample surveys, the most potent fact finding process available to the administration." So, Prof Mahalanobis was one of the few pioneering statisticians instrumental in the creation of the United Nations Statistical Commission. He received the Weldon Medal from Oxford University in 1944 and was elected a fellow of the Royal Society, London in 1945, for his contribution to statistics, particularly, in the area of sur-

vey sampling. He was elected Chairman of the United Nations Sub-Commission on Statistical Sampling in 1947, and held the post till 1951.

Prof Mahalanobis felt that the planning models developed for advanced countries might not be applicable to India. So, he developed completely new planning models, which are known as two-sector and four-sector models of economic development. Prof Mahalanobis therefore responded by creating two strong pillars of the Indian statistical system, viz., the National Statistical Survey Organisation and the Sample Survey Organisation. These two organisations have brought India to the world map of official statistics.

Prof Mahalanobis had over 200 published scientific articles along with many non-technical articles in Bengali and English. He was awarded Srinivas Ramanujan Gold Medal and Padma Vibhushan in the same year (1968). He contributed a lot to statistics at global and national levels, and rendered yeoman service to his motherland as a planner.

Prof Mahalanobis died on June 28, 1972, a day before his 79th birthday when he was still actively doing research work and discharging his duties as Secretary and Director of the ISI and as honorary Statistical Adviser to the Govt of India. The Govt in 2006, decided to celebrate his birthday, June 29 as National Statistics Day.

# Internationalising higher education: Its scope

■ Dr Marie Kalita

Internationalisation of higher education can be defined as 'any systematic effort aimed at making higher education responsive to the requirements and challenges related to the globalisation of societies, economy and labour market.' Higher education today is undergoing a huge transformation and universities have greatly evolved through the process of rationalisation in ideas, structure and the overall processes leading to the free and universal character of knowledge. Today dissemination of knowledge is highly influenced by its interdependent character and mobility of ideas.

Internationalisation of higher education mainly takes two forms. One is when universities practise internationalisation on their own campus by exposing students to international cultures through curricular and extracurricular practices. And the other one is transnational education where internationalisation abroad includes strategies whereby students, campuses, ideas and practices cross borders. Universities in the first form can undertake many actions like international curricula and programmes, extracurricular activities, liaison with local/cultural/ethnic groups, etc. On the other hand, internationalisation abroad focuses upon those educational activities that involve some movement across borders. It may include higher education by public/private and non-profit providers which encompasses a wide range of modalities from face-to-face learning to distance learning.

In today's perspective international student flow has become a central feature of the global higher educa-

tion scenario. Over the last thirty years international student mobility has risen by more than 300 per cent. Most countries of the world have witnessed a high growth rate of foreign student enrolment. This is indeed a good sign and observers feel that this trend will continue. This international student mobility is supported and stimulated by various kinds of programmes and schemes. And it has been observed that most of the universities encouraging international students' mobility have several bilateral and multilateral agreements and programmes in the field. In India also there are many student exchanges through university-to-university bilateral arrangements or national level agencies facilitating students through scholarship schemes.

One interesting observation regarding internationalisation of higher education is that students from developing countries go to developed countries and contribute to the knowledge production there by joining the teaching and research activities. Sadly, India is contributing in a large measure to the mobility of talent towards developed nations. This is a result of non-conducive conditions within the higher educational institutions to retain and attract the students from within as well as from abroad notwithstanding the fact that there are lot many pronouncements which remain on paper only.

If India wants to retain and attract the pool of talents and create a stra-

tegic place in the production and dissemination of knowledge, then the national policy and its implementation have to be given topmost priority. Another way out is the creation of a regional alliance in the Asian region with strategic partners. Faculty exchange programmes within the ambit of internationalisation of higher education are also a must.

**Internationalisation of higher education mainly takes two forms. One is when universities practise internationalisation on their own campus by exposing students to international cultures through curricular and extracurricular practices. And the other one is transnational education where internationalisation abroad includes strategies whereby students, campuses, ideas and practices cross borders.**

It has been observed that internationalisation of faculty is a very complex issue. Students from developing countries such as India and China go abroad, mainly to European countries and the USA for pursuing higher education. After finishing their studies most of the talented students join the academic profession abroad as they find it highly rewarding in terms of salary and academic environment as compared to their own countries. This phenomenon has gained much importance for the fact that the average age of academic faculty in the developed countries is quite high as compared to that in the developing countries. Whatever may be the reason, it has been widely ob-

served that a large pool of human resources going out has led to increased production of knowledge in the developed countries at the expense of the developing nations. Countries like USA, UK, Sweden, Netherlands, Germany and Japan have got a high percentage of highly internationalised faculties in higher education. Most of the faculties from developed countries have very small percentage of their academic staff who have earned their highest degree from foreign countries although their faculties are mostly internationalised.

Of late internationalisation in Assam's perspective has been gaining ground under the present government. It is planning to attract foreign students to the State and has asked the institutions of higher learning to create additional seats for such students. The UGC

(University Grants Commission) has also stressed the need for it in the country. Institutions have been asked to create upto 25 per cent of additional seats for international students over and above the total number of enrolments in undergraduate and postgraduate courses. However, the authorities of the institutions of higher learning have been given the right to take decisions in this regard by considering issues like infrastructure, availability of faculty members, etc. Depending on the availability of such prerequisites all the departments will be allowed to permit international students equally among them. But the additional seats for international students will not cover

the students who come to the institutions under the exchange programmes following signing of MoUs. Institutes will have to create separate offices for international students and these offices will maintain all the records of such students. Anyone having a foreign passport would be termed an international student. Another important point is that the institutions of higher education admitting such international students will have to take permission from the regulatory authorities for creating such seats. The authorities should put up all the details for admission of international students in their websites. These institutions will have to follow the rules of the Government of India regarding visas, registration of foreign students with the foreigners' registration offices, etc.

Internationalisation of higher education has gained importance in the present circumstances with the rolling out of FYUGP (Four-Year Undergraduate Programme) based on the NEP 2020 by the Government of Assam from August 2023 where students will get the option of multiple entries and exits, a certificate or a diploma or degree with or without major or a degree with research (honours) at various levels in all the affiliated colleges. Another very pertinent and important addition to the NEP 2020 is the importance given to vocational courses which have been made mandatory. This will give the students the opportunity to gain skills in various skill-based courses within the campus itself.

Let us hope this new era will find us in a much more advantageous position and bring us benefits in the long run which will definitely bring fruits and show results in the higher education scenario of our country.

AT/29/23

# Rankings, and the realities of higher education

**T**he National Institutional Ranking Framework (NIRF) recently released the India Rankings for 2023. This is the eighth consecutive edition of rankings of higher education institutions in five categories – overall, universities, colleges, research institutions, and innovation – and eight subject domains – engineering, management, pharmacy, medical, dental, law, architecture and planning, and agriculture and allied sectors. The NIRF evaluates institutions on five parameters: teaching, learning and resources; graduation outcome; research and professional practices; outreach and inclusivity; and perception. Ranks are assigned based on the sum of marks secured by institutions on each of these parameters. Notwithstanding some of the criticisms on the methodology adopted and the parameters chosen by the Ministry of Education, a scrutiny of the 2023 edition as well as some of the available data on higher education raises some important issues warranting policy attention.

## Some issues

The first is the issue of participation of institutions. According to the Ministry of Education, in this edition of NIRF, 5,543 institutions offered themselves for ranking under overall, category-specific or domain-specific ranking. In all, 8,686 applications for ranking were submitted by these institutions. This has to be seen in conjunction with the total number of universities and colleges in India. As per the All India Survey on Higher Education (AISHE) 2021, there were 1,113 universities and 43,796 colleges in 2020-21. This implies that only 12.3% of higher educational institutions participated in the ranking process. That there is near to no information on the parameters decided by NIRF for the remaining 87.7% of higher education institutions is a matter of concern,



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especially for a nation aspiring to reap rich demographic dividends. This issue gets accentuated further when we examine the rural-urban divide in participation. The list of top 100 colleges shows scant presence of colleges from rural areas. AISHE data show that about 43% of the universities and 61.4% colleges are in rural areas. The lack of participation of institutions from rural areas raises questions on the inherent urban bias of the ranking framework, reinforced by the choice of parameters.

The second issue is the incongruence between quantity and quality. Of the top 100 colleges ranked by NIRF, 35 are from Tamil Nadu, 32 from Delhi, 14 from Kerala, and the remaining are from the rest of India. According to AISHE, Uttar Pradesh has the highest number of colleges in the country, followed by Maharashtra and Karnataka. The list of top 100 colleges does not feature a single college from U.P. It features three colleges from Maharashtra and two from Karnataka. The fact that 81% of high-quality colleges are in three States highlights the need for a mission to improve quality across the country, with both the Union government and the States earmarking substantial funds in their respective budgets for this.

Quality differences are evident between private and government institutions as well. In the overall rankings, the highest rank secured by a private institution is 15. In the university rankings, the highest rank secured by a private institution is six. There is also tremendous scope for many more State universities to figure in this list. If the quality of State universities is enhanced, it would also serve the purpose of serving students in rural locations.

The third issue stems from the close correlation between faculty strength and rankings. A comparison between the top 100 and remaining institutions shows vast differences in this regard. The average number of faculty in the top 100 universities is 6.6, while

for the remaining universities it is only 242. In the case of colleges, it is 173 for colleges in the top 100 list and 71 for the remaining institutes. Needless to say, quality education cannot be provided with brick and mortar alone. Even in the case of engineering, where the ranking is often advertised by the institutions, only 33.98% adhere to the AICTE-prescribed faculty-student ratio of 1:20.

## Scientific publications

Faculty strength and quality also get reflected in scientific publications: 87.71% of the scholarly output from India comes from eligible institutions in the overall category. This means that 12.3% of institutions which have participated in the ranking contribute close to 90% of scholarly output in the country. This is even more startling in the case of engineering, where 99.98% of total scientific publications came from the institutions participating in the rankings. Interestingly, in management, 50% of the institutions which applied for being included in the rankings had zero publications.

The rankings underscore the urgent need for quality enhancement in the higher education system. This requires substantial financial resources. India's share in the overall world scientific publications is about 4.81%. In comparison, China's share of world publications increased from 5% in 2000 to 26% in 2018. This was facilitated by massive research investments by the Chinese government. Between 2000 and 2017, as per an article by Shumin Qiu, Claudia Steinwender and Pierre Azoula in the *LSE Impact Blog*, the number of Chinese universities increased by 140%, research faculty increased by 69%, and public research funding increased ten-fold. If rankings are to serve the purpose of being an input for informed evidence-based policy decisions, then budgetary outlays for higher education needs a quantum jump in India.

The NIRF rankings underscore the need for massive quality enhancement in the higher education system

# How much employment-generation does the economy need?

If policymakers talk of creating work for 5 million-8 million young in India, that will barely scratch India's unemployment problem

## DATA POINT

Arun Kumar

Economists associated with the government have been arguing that there is not much unemployment since enough employment is being generated. Further, they argue that the employment required to be generated annually is not too much. Bibek Debroy, Chairperson of the Prime Minister's Economic Advisory Council, wrote in an article in *The Indian Express* that analysts are ignoring the drop in the population growth rate from 1.5% earlier to (possibly) 0.8% now. He asks "...how many jobs India needs to create every year." He says, "When one encounters figures like 10 million or 12 million, one often doesn't realise these are dated figures...circa 2003-04". He suggests, "A rough range might be 5 [million]-8 million."

## Labour force

His statements reflect thinking in the government and need to be analysed. First, how is the current population growth rate relevant to the present increase in the labour force? The labour force comprises those in the age group of 15-64 (International Labour Organization definition) who are looking for work. The current population increase will impact the labour force 15 years later when those born this year will potentially join the labour force. So, even though Mr. Debroy discounts circa 2003-04, children born then are precisely the ones who have been entering the labour force since 2018-19 after obtaining a high school degree. In 2020-21, those obtaining an intermediate degree could have joined. And so on.

Further, even after obtaining a degree, people may not join the labour force as they may prepare for various exams. But eventually all of them will. The children of the lower income class can't afford to

remain unemployed for long. Middle-class children also have to start working as they face increasing social pressures. Very few of the young become entrepreneurs. This is because few possess the capital and skills required for this.

Second, it is the birth rate and not the rate of population increase that is relevant. Population increase equals births minus deaths. Life expectancy in India is above 70 years. Children also have higher mortality. So, we can subtract from the number of births in a given year the deaths among the under-five years. Assume a negligible number will die at ages 5-50. So, for the number of people entering the labour force, the death rate is not really crucial.

Applying the birth rate for a given year to the population gives the number of births in that year. Subtract from that the deaths among children below five years of age. That gives the increase in the potential number of young who can join the labour force 15 years later (at age 15). So, in 2000, the increase comes to 28,061,890, in 2002 the figure was 27,990,015, in 2005 it was 27,783,231, in 2007 it was 27,456,018, and in 2022 the increase was 24,167,206 (Table 1).

Why are these years selectively picked? They indicate that the potential young are increasing at the rate between 24 million to 28 million in the period 2000 to 2022. Further, these years are relevant because it is in those years that children in 2022 would have obtained high school, intermediate, under-graduate and graduate degrees and possibly looked for work. They potentially enter the labour force. Education data tells us what per cent of the relevant age group enrolls for each of these degrees. So, those not enrolling would potentially join the labour force. Calculated this way (Table 2), the numbers potentially joining the labour force in 2022 would be 17,928,780 from those born in 2007; 2,583,841 from 2005; 5,598,003 from 2002; and

1,403,095 from 2000. The total is 27,513,718.

Fewer women are likely to join the labour force for social reasons, so the above numbers have to be segregated between women and men. In 2022, there were 1,068 men for every 1,000 women. This means that 48.35% of the total number would be women (13,304,506). Assume 25% of them will not be able to work for social reasons. This yields 24,187,591 potential young people who could enter the labour force in 2022. Some of them would prepare for exams. But those from earlier years who have already spent years preparing for exams would join the labour force. Actually, if enough work was available, most of them would not appear repeatedly for many of these exams. Some of the young will go abroad for work and/or studies but their number is small compared to the total. Many of them may also not go abroad if work was available.

## Unorganised sector

The organised sector is mechanised and automated and generates few jobs. That is why 94% of the labour force is in the unorganised sector, largely working at low wages. On the e-Shram portal, 28 crore were registered in November 2022 and 94% reported earning less than ₹10,000 per month. The growth of the organised sector at the expense of the unorganised sector results in rising unemployment. Unemployment has been characterised as unemployment; under-employment; disguised unemployment; and those who have stopped looking for work. Simplified assumptions give the figure of those needing proper work at 286 million – all of them from the unorganised sector. Only 332 million have proper work and most of them also work in the unorganised sector. This data makes it clear that if policymakers talk of creating work for 5 million-8 million young, that will barely scratch India's unemployment problem.

## How many need work?

The data is based on the Report of the 'People's Commission on Employment and Unemployment' set up by Desh Bachao Abhiyan and launched on October 11, 2022. Arun Kumar, retired Professor of Economics, JNU, was the Chairperson



Table 1: Historical birth rate, death rate, potential labour force of India (2000-2022)

	1	2	3	4	5
Year	Birth rate	Population	Births Col 1 * Col 2	Under five deaths per 1,000 births	Absolute deaths Col 4 * 1,000
2022	17.2	1,409,963,668	24,199,206	32	32,000
2007	23.3	1,181,273,943	27,515,414	59	59,396
2005	24.3	1,147,609,927	27,847,902	65	64,671
2002	25.7	1,091,794,636	28,063,489	73	73,475
2000	26.6	1,056,575,549	28,141,890	80	80,000
	6		7		
Year	youth pop. increase Col 3 - Col 5		youth potentially entering labour force		
2022	24,167,206		-		
2007	27,456,018		17,928,780		
2005	27,783,231		2,583,840		
2002	27,990,015		5,598,003		
2000	28,061,890		1,403,095		
Total	-		27,513,718		

Source: India birth rate 1950-2022 is accessed from macro trends (www.macrotrends.net/countries/IND/India/birth-rate). It was accessed on October 25, 2022

Notes: Column 2 is based on projections for intervening years | Column 4 is based on projection from 2000 to 2022 | Column 7 is based on data in Table 2 below

Table 2: Potential entry into the labour force in 2022, after obtaining various degrees



Calculations using column 6 of Table 1 shows that in 2022, potentially there will be

...65.3% of those born in 2007 and surviving who can join labour force: 17,928,780

...9.3% of those born in 2005 and surviving who can join labour force: 2,583,841

...20% of those born in 2002 and surviving who can join labour force: 5,598,003

...5% of those born in 2000 and surviving who can join labour force: 1,403,095

Total: 27,513,718

# Kota suicides need an urgent response

For millions of people, the cramped coaching centres in Kota are a lodestar. Teenagers jostle for a once-in-a-lifetime shot at prosperity by securing a seat in India's premier engineering and medical schools. On their shoulders is not just the weight of their careers but the load of expectations of their families. And, for decades, despite burgeoning concerns of pedagogy, mental health and student future, Kota has delivered; which is why thousands of people pour into the dusty Rajasthan town every year from the hinterland. Unfortunately, there is a macabre side to this successful factory line of young men and women. Over the past 48 hours, a 17-year-old student from Uttar Pradesh was found dead at a rented accommodation in Kota and another student was suspected of having died by suicide and left a note. Just this month, four students have died in the coaching hub, taking the toll this year to a grim 15. The same number of students ended their lives in Kota in 2022, underlining that things were not getting any better.

Around 225,000 students study for entrance exams in Kota. Research has established that many find the grind stressful, tipping some vulnerable people over the edge. A 2018 report by the Tata Institute of Social Sciences found many students depressed, ill, anxious, and unable to deal with the pressure and the breakneck pace of coaching. The state government, too, has proposed a bill to regulate institutes but this is yet to be operationalised. There is an urgent need for more robust oversight and a relook at the testing patterns for these prestigious exams. No student's life is worth the drudgery of inhuman pressure and untimely death.

HT/29/16

# Slip in rankings

Funds vital for quality higher education

**O**THER than a few bright spots for Indian institutes, the Quacquarelli Symonds (QS) World University Rankings 2024, released on Tuesday, have failed to bring cheer to the country's education sector. Ranked 149th, IIT-Bombay has made it to the top-150 list. The University of Delhi (ranked 407th) and Anna University (427th) have entered the top-500 tier. However, the situation is largely bleak as most other so-called prestigious institutes and universities have slipped in the QS rankings, including other IITs and IISc-Bangalore. In all, 45 Indian universities — up from 41 — find a place in the latest rankings that feature 1,500 institutions. The shift in positions could be attributed to a reset in the methodology applied in this QS edition, which introduced Sustainability, Employment Outcomes and International Research Network in the assessment criteria.

It is disconcerting that most of the universities from the region have not seen any improvement in their rankings. Rather, they have diminished in eminence even in other surveys, such as the Education Ministry's NIRF rankings. That many of them are battling staff and fund shortages only hits their image further and is a cause for concern.

To keep pace with the universities gaining in stature, notably the Chinese ones, which are flush with funds for research and innovation, India needs to increase its education budget. The Union Cabinet's approval for the National Research Foundation (NRF) and setting aside Rs 50,000 crore for the project from 2023 to 2028 is a good start. With its focus on state-level universities and institutions in rural areas, the NRF could help arrest the slide in the quality of higher education in India. It's the key to improving the employability of the youth. 25/29/6

# The ₹50K Crore Bet

*National Research Foundation is a fine idea. But GOI's challenge is nudging private firms to increase R&D spend*

In 1980, India and South Korea were on a par in an important area. Both countries spent about 0.6% of GDP on R&D. Four decades later, the difference is stark. India's R&D expenditure as a percentage of GDP is still less than 1% while South Korea's is close to 5%, pulled up by its private sector that accounts for four-fifths of it. Korean conglomerate Samsung now outspends India's collective annual R&D effort. This is the context in which GoI's plan to legislate a National Research Foundation should be placed.

The foundation, which will have a ₹50,000-crore corpus for a five-year period, has been designed as an apex body to provide high-level strategic direction to scientific research. GOI is pulling out all stops for the



proposed NRF. PM will be the ex-officio president of its board. It's a positive signal on the seriousness of the effort, which includes a mandate to enable collaborations between public and private bodies carrying out research. At this point, consider the structure of India's R&D effort. About 56%

of R&D spend comes from the government and 35% from the private sector. The profile in technologically advanced countries is different. R&D is led by the private sector, contributing as much as 88% in Israel.

India's at a crucial point when it comes to R&D. There's the example of Mexico where the R&D spend to GDP ratio has stagnated for decades, and so has Mexico's per capita income growth. On the other hand, there are the examples of South Korea and Taiwan that over the last four decades witnessed a private sector led surge in R&D's share in GDP to emerge as technology leaders and as prosperous countries. A measure of NRF's success will be the extent to which it nudges India's large firms to raise R&D spends. Think tank CTIER's data shows that in 2021, India's top 10 most profitable non-financial firms spent on average just 0.3% of sales on R&D, with TCS topping at 1.4%. This level of spending won't produce technology leaders.

18/130/16