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Last month, Prime Minister Narendra Modi while speaking at the centenary celebrations of Aligarh Muslim University said that there has been an unprecedented increase in the rate of Muslim girl education in the country. It is due to the government policies, he said, that the dropout rate of Muslim girls reduced from 70 per cent to 30 per cent in the last decades.

She suggests that the government is investing steps in the right direction. However, there are a few regions where the impact of such schemes has started showing only recently, that too with the combined efforts of the non-government organisations to fight unawareness and orthodox values that act as a major hindrance.

One such region is Niwai Block in the Tonk district of the Western state of Rajasthan. In the block's Khidgi village resides a nomadic community called the Muslim Banjaras who are known for their ignorance towards girls' education. Their insistence to follow patriarchal beliefs restricting girls and women within the household is the main reason that has deprived several adolescent girls of their right to acquire basic education for long.

There are around 250 households in this rural settlement called 'Dhani' which, in local language, refers to the area settled by some families outside the main village. Pinki Khangar, a social activist, informed that a major part of this community earns its livelihood by selling blankets in other cities while few families are engaged in cattle trade. "Due to work, most men of this community migrate for more than half of the year. Owing to reasons like poverty and low social status, not much importance is given to the education of girl children. They are often married at a young age," she said.

However, things have started looking positive now. "There are girls from this Banjara community who have started to come forward fighting

Against all odds

The education of girls tremendously impacts not only their own development but also their families and communities, says RAMA SHARMA



all the odds. One such girl is Sohina who is not only pursuing education but is equally determinant to raise awareness against illiteracy and child marriage in her community," shared Pinki.

While appreciating Sohina's efforts, the head of the village, Islam

Khan said, "Sohina was compassionate even as a child and was always eager to help others. She had her own ways to fight for the rights of the girls and at that time, I would think wrong of her. However, her willingness to support this community has changed my opinion."

While appreciating the unflinching courage of Sohina, Mohan Lal, who teaches at the Primary School in Dhani said, "This girl has worked hard not only to connect herself with mainstream education but has inspired around 50 girls of nearby areas of Shyampura Dhani, Ghatta

Patti Dhani and Amarpura Dhani to pursue their dream of being educated."

Mahendra Jain, Principal of Secondary School in Khidgi admitted that the general approach towards this community was negative and teachers weren't too concerned about the education of girls. However, Sohina's confidence and courage transformed their approach.

Besides promoting girls' education, Sohina along with other members of *Kishori Manch* — an adolescent group run by a non-profit organisation in the region, is also creating awareness among other members of her community regarding several social welfare schemes run by the government.

Under her leadership, 150 old age pension forms were filled and submitted to the concerned authorities while 10 widows were connected with the widow pension scheme. To boost the confidence among girls and to make them self-reliant, several girls have been given employment training and been associated with NREGA. In addition, 15 girls are receiving computer training and stitch cutting training under the *Pradhan Mantri Kaushal Vikas Yojana* which could not have been possible without Sohina's efforts. She also inspired 10 girls from her community to pursue nursing training programmes just like her.

"For creating awareness and helping people of the village to benefit from several government schemes, Sohina has been also honoured by the Gram Panchayat," informed Kamlesh, a junior assistant to the Panchayat committee.

Sohina's journey, however, has been full of challenges. "We were also quite orthodox in our approach towards our daughter. We would not have allowed her to step out of the house if social worker Giriraj Sharma would not have counselled us. It helped us understand the importance of supporting our daughter's education. We also supported her decision to train with the *Kishori Manch*," shared Sohina's parents. Besides, the poor economic condition of the family also created troubles but Sohina acted with courage and continued to raise awareness among other girls. Today, not only her parents but the entire community is proud of her.

Sohina believes that girls have never been a weaker gender and that they should get equal opportunities. Here, not surprisingly, the female literacy rate is just 10 per cent of the entire village population.

These are the regions which need special attention. Clearly, the existing modus operandi isn't sufficient to address the needs of such low-income communities residing in rural and remote areas. If the government intends to further reduce the drop-out rate of Muslim girls from school, it will need to work with these communities closely. Only then can every girl become inspiring, courageous and self-reliant.

(Rama Sharma is a recipient of Sanjoy Ghose Media Awards 2020.)

—Charitra Features

Decentralization of digital education

■ Abhijit Rajkhowa

A general understanding of digital education is an audio-visual reproduction of textual contents, a mechanistic understanding promoted by the prodigal spending into building digitized classrooms with computers and flat screens, mostly by well-endowed private schools. However, digital education calls for much more than that which is to leverage growing technology to improve curriculum, pedagogy and knowledge sharing.

The National Mission in Education through ICT, launched in 2009 and administered by the Ministry of Education, attempts to utilize ICT to make the best quality content accessible to all learners in the country free of cost. Major initiatives currently in vogue under the programme range from Study Webs of Active Learning for Young Aspiring Minds (SWAYAM), an integrated platform for offering online courses and covering school (from classes 9 to 12) to postgraduate level, National Digital Library, a virtual repository of learning resources with a single-window search facility, virtual labs and spoken tutorials. In March 2010, the Government of India authorized the setting up of the National Knowledge Network (NKN) which intended to connect all the knowledge and research institutions in the country using high bandwidth/low latency network. The National

Programme on Technology Enhanced Learning (NPTEL) was started by seven IITs and IISc Bangalore in 2003 to be an asynchronous platform for offering pre-recorded videos, lecture notes, assignments and quizzes and certification courses.

The National Optical Fibre Network was conceptualized in 2011 to connect 2,50,000 gram panchajats and BharatNet was set up to execute the mission in 2012. The Digital India Mission, launched in 2015, gave a new impetus to strengthening the digital ecosystem of India.

The severe lockdown enforced due to Covid-19 in 2020 yielded valuable lessons regarding the critical gaps in digitalization of education in India as the entire sector from primary to postgraduate research levels were forced to migrate to online platforms with institutions shutting down due to the fear of becoming viral hotspots.

The federal structure of the pre-1976 Constitution empowered the Union to lay down guidelines and standards and establish specialized institutions that foster research (Entry 64-66 of List I in the seventh schedule) and education was left for the States, now included in the Concurrent List. Even after the 42nd amendment, education at large, mostly primary and secondary education, is taken care of by States, albeit with a vast network of Kendriya Vidyalaya, Navodaya, Ekta Jyotiya schools and central high-

ered education institutes. Under Entry 15 of the 11th schedule 'education including primary and secondary education' may also be entrusted to rural local bodies.

The federal set-up of the Indian polity was established to ensure uniformity in certain subjects and the idea behind the concurrent list was to secure a disaggregated implementation of policy stated to the needs of the local population, the adage of 'unity in diversity' being accommodated in the prime law book. As such, education policies, regulatory standards must conform to specific guidelines, or at the least, adhere to the basic minimum but beyond that, it must have a variegated approach. For, the needs and conditions of the people of Maharashtra and Assam are different and so are of the urban dwellers in Delhi and the tribes of Jharkhand.

A reflection on the preceding statement may be found in the Telecom Statistics Report 2019. Internet subscribers per 100 population of the rural India is 25.36 while that of the urban area is 97.94. Interestingly, 2018-19 witnessed a 55.67% growth in the total number of internet subscribers in rural area, significantly more than the urban growth. The States of Gujarat, Karnataka, Kerala and Punjab have a tele-density of over 100 per 100 population (more than one connection per person) while the corresponding figure for Bihar and Assam service area is 69.96 and 68.81

respectively – an evidence of the geographical inequalities in digital readiness.

Digital education warrants more than the use of laptops, tablets and cellular hand devices. The backend and front-end linkage in education carries the potential for a digital revolution. Real-time text-to-speech conversion and handheld auditory devices can be used to remove the barriers in Divyang education. Artificial Intelligence (AI), automated grading system and chatbots can effectively reduce the over-reliance on teaching faculty and also remove any delicate subversion of academic rigour in evaluation and the inherent bias among faculties. Adaptive learning systems in AIs can evolve based on the candidate's capabilities and challenges, and in the long run, has the potential of providing customised content for every student, i.e., the 'individual attention' every parent craves for. Cyber systems fall under the purview of residuary subjects making Parliament the authority to legislate and act on it. Moreover, research into AI and other advanced computational mechanics require bold investments, tweaks in trade regulations and technology transfer, all of which are effectively managed by the central government, either by mandate or in practice.

The internet is progressively becoming cheaper and technologically more accessible. The time is thus apt for focusing on digital ed-

ucation and bridging the critical gaps by getting the State governments on board. The Alternative Academic Calendar developed by NCERT which expected state education bodies to take the lead is an exemplar in this regard. Recently, Kerala has claimed to have become the first fully digital State in education with the completion of high-tech classrooms and high-tech labs' projects in all government-run schools.

However, if States were to be entrusted with the transformation of education it must be clearly laid out that digital equipment and tech-savvy teachers alone cannot guarantee the success of digital education. If the Central Government were to focus on creating R&D and infra structure, then the State governments must move beyond installing computers and television screens. The way forward for policymakers in States would be to share responsibility in teacher training, curricular re-evaluation and reforms based on stakeholder feedback and localised content creation through de-duplication of efforts.

It is time for the Government of India to entrust the finer modalities of digital education to the State governments and pass on the buck while it shifts its focus to funding resources into R&D, building digital infra structure and identifying nodal policies and standards. The dream of an Atmanirbhar Bharat cannot be possible without realizing *Atmanirbhar Rajyas*.

Learning languages that bridge cultures, build careers

Expertise in an additional language can boost your career prospects, writes Nalme Nachiyar

Despite the disruption of normal life caused by Covid-19, the world is more connected than ever before. With people continuing to move between countries, there is an increasing need for people who can help bridge linguistic gaps. And this is where foreign language experts come in.

Poorna Venkatesan understood this early in her career. A Master's graduate in Computer Technology, Poorna was working with a Switzerland-based client at a multinational technology company when she realised that learning German could help her in collaborating with the team. However, she only got down to it two years later, after she had quit the job.

"I took up German as a hobby but grew to like it, because learning a new language was like decoding something. I completed



Poorna Venkatesan

all levels till C1 in Goethe Institute without thinking of it as a career. I began teaching a few private classes, while also looking for opportunities in translation or interpretation. That's when a freelance opportunity to teach business German at Mercedes Benz came my way," she says.

Learning an additional language is a critical skill that can boost career prospects.

Today, German, French, Spanish, Chinese and Japanese are among the most sought after foreign languages, with several institutions offering certificate courses in them.

In India, as elsewhere, all European languages are taught under a common framework spread over six levels, spanning from A1 to C2. Level A1 teaches you

to handle everyday, basic conversations and situations. Levels B1 to C1 deal with more complex topics, like environment or politics. In C2, students are taught the literature of that language, and the level is mostly attempted by those looking to do a Masters in foreign language literature, comparative literature or translation studies.

According to Poorna, a B1 intermediate level certificate is adequate for entry-level jobs or for admissions into any German, Swiss or Austria-based universities.

But to be fully proficient in a language, students have to clear the C1 level and it takes roughly 2.5 to 3 years to complete all levels without break. For those looking to go beyond simply learning the language and make a career out of it, a teachers' training, translation or interpretation

course after C1 can work wonders.

Learning while teaching

Poorna realised her love for teaching during the rigorous two-month business training programme at Mercedes Benz and proceeded to do a Teachers' Training Course (TTC) at Goethe. "I found teaching interesting because I was meeting new people all the time. I had to come up with new activities and games and think about how to present it to students," Poorna says.

Depending on the level of proficiency, the scope for a foreign language expert is tremendous and includes teaching (basic as well as business/technical jargon), academics, translation (catalogues, documents, literary texts, children's books), travel companies (as guides, customer

care personnel), consultation (planning curriculum for schools or colleges).

Foreign language experts are also hired by embassies to ensure smooth communication between leaders and diplomats of two countries. Multinational companies follow this process as well, usually when they have to present a project or explain a product to the foreign team.

"If I'm doing business with someone, there is greater trust and emotional connection when I am able to speak their language. It is not just learning about grammar rules but also the culture and way of life of people."

(Mapping Niches is a fortnightly series that sheds light on careers that are off the beaten track, through the eyes of professionals working in a particular field)

Learning through play

When integrated with academics, games ensure holistic development of students, writes Kavita Sahay Kerawalla



Do not keep children to their studies by compulsion but by play.

Plato

Play is a powerful activity. When children play, they are actually learning essential skills, exploring what interests them, developing cognitive abilities and at the same time having fun.

According to cognitive learning theory, by engaging students' visual and auditory senses, and making learning active, they can be encouraged to develop better information recall. This is why playing is so important. Whether it is solving puzzles, making sandcastles, role-playing, telling stories or constructing designs with building blocks — integrating play activities into the curriculum offers immense benefits. It makes students active participants in their learning and helps develop physical, social and intellectual capabilities.

Better adaptation

Play-based learning is even more important during these times, when things are changing fast and new technologies and concepts are emerging rapidly. In an article titled *Five essentials of meaningful play*, National Association for the Education of Young Children stated that, the im-

portance of play comes from a natural desire to understand the world. It is important to blend play into the curriculum to make a child a curious and excited learner and adapt better to a dynamic environment.

According to a 2012 study titled 'Play in children's development, health and well-being', learning through play enhances the progress of early development from 33% to 67% by increasing adjustment, improving language and reducing social and emotional problems. Various studies also suggest that playing helps the brain develop cognitive abilities and makes us adaptable to ever-changing circumstances.

Incorporating play in the curriculum, hence, prepares students to live and work in a world that is undergoing massive and constant disruption. Play is spontaneous, and so it also provides students with opportunities to hone decision making and resilience, which are vital skills for the future.

Students also learn essential skills such as numeracy, literacy and problem-solving better by playing games and demonstrating their thinking as they describe what they are doing. Transforming classrooms into experiential spaces that utilise well-thought-out play-based, hands-on activities is vital for regular lessons and developing future skills.

This suggests that purposeful play, when integrated with rigorous academics, ensures the holistic development of students. It offers them opportunities to indulge in their inquisitiveness, and to explore, engage and connect with the world we live in.

How can schools integrate play with curriculum?

Current skills may become redundant in the future as new technologies arise. Strengthening cognitive ability, decision-making skills, collaboration and experimentation helps prepare children

for learning new concepts that are yet to emerge, and for adapting effectively to evolving circumstances.

Study-play integration has an important role in preparing students for the challenges of a dynamically changing world, and learning is best imparted through interactive classes, sports, games and experiments. For instance, teachers can utilise guessing games and puzzles to teach important concepts.

Scientific processes and mathematical operations can be acted out using objects and hand gestures, so students can 'see' what's going on in the problem. Another example of a role-play activity is Model United Nations, which encourages students to delve into real-world health and socioeconomic issues and find innovative solutions collectively.

Balanced curriculum

The school curriculum should be de-

signed to ensure the right balance of academics, sports and arts.

This will help students see connections between what they are learning and real life. The best way to revamp the curriculum to incorporate play is by leveraging technology.

Educational apps and interactive online games allow for full classroom participation and engagement. They are fun and also help reinforce concepts, math, spelling, reading, and phonetic skills. Another way is forging partnerships with educationists, sports coaches and corporate professionals to design curricula that ensure 360-degree development of children.

As renowned author Vince Gowdman puts it, 'Play is the language of children. Have you spoken it to them lately?'

(The author is vice chairperson of a group of schools and vice president, Early Childhood Association)



Mere schooling does not translate to better jobs for women, especially in STEM. Interventions at critical junctures can help change that, writes Priyanka Krishna

Getting women into STEM

In my Physics department, out of 100 people, only about 22% are women. Having women in physics is difficult. We have been discouraged since early times."

This is one of the comments from our recent study, *STEM Mindsets, Careers and Women - An Indian Study*, while sharing how women experience workplaces.

From a gender lens, the study highlights women's experience of STEM career pathways.

Research shows that 43% of Science, Technology, Engineering and Mathematics (STEM) graduates in India are women but their share in STEM jobs is a mere 14%.

Data shows that while women are entering school and college and doing well in greater numbers, they are not staying on at work, especially in STEM. This means that more schooling does not mean better jobs or better lives.

Women either drop out of a STEM career midway, pursue careers in other fields or drop out of the workforce altogether.

The reasons for such low representation of women in STEM fields range from unequal responsibilities at home, gendered stereotypes and internalised self-limiting beliefs to limited organisational support and discrimination within systems.

Male-dominated workspaces

For instance, women report an impermeable 'bro culture' at workspaces, due to which they often find it difficult to network among peers — an activity crucial for success in

In a survey among working professionals, those who reported the presence of more than 70% women in their organisation were in the education sector.

People who reported the least women (less than 20%) in their organisation were in engineering (automobile, construction), technology and pure science.

REASONS FOR POOR PARTICIPATION OF WOMEN

27% Societal stereotypes	23% Family pressure	19% Lack of organisational support	10% Difference in abilities
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Gender-skewed reporting structure

51.4% mentioned that they report to men

18.6% mentioned that they report to a woman lead

male-dominated spaces at work.

A study conducted by Kelly Global Workforce Insights (KGWI) found that 81% of Indian women in STEM jobs perceived gender bias in performance evaluation and that women tend to drop out of the STEM workforce around the years of childbearing or at mid-management levels.

So what would help?

Interventions have to be made at critical junctures, in organisations and at home, to encourage girls to participate equally in STEM careers.

Change in mindset: At the societal level, the general mindset that women need to give up their career for the sake of child rearing or caregiving needs to be chal-

lenged. Families could pitch in by having both men and women share the responsibility of childcare, and be supportive at home of women who are working or wanting to get back after a break.

Support after maternity: Organisations could create systems to support women who want to return to work after childbirth, rather than viewing the temporary break as a setback. Workspaces should provide childcare facilities.

For instance, The National Centre for Biological Sciences, Bengaluru has managed to retain its pool of women scientists by providing excellent childcare facilities within the campus.

Hire more women: Organisations could insist on hiring women to offset the

statement that 'suitable women candidates do not exist'. This would force managers to look for women employees rather than stay with their biases.

Create spaces: Within the organisation, professional teams need to create spaces for women to be part of the office network.

Male managers could be made aware that women are left out of the groups, and try to include them in safe spaces for discussions on work. Women could create their own networks.

Challenge stereotypes: As individuals, women need to challenge stereotypes and be comfortable with their own femininity, as mentioned by a woman data security engineer. According to her, women should focus on contributing to the company's goals (making money) and carve a niche for themselves.

The director of engineering in chip design also spoke about the need for women to be more comfortable taking risks and failing rather than conforming to a so-called perfect version of themselves that could sabotage their careers.

Marathon, not a sprint: Lastly, women ought to view their career as a marathon, rather than a sprint, and pace themselves. Some women professionals mentioned the role of a teacher in their career. For aspirational STEM careerists, it is important to actively and purposefully build such teacher/mentor networks to help them grow.

(The author is a development practitioner and researcher)



Focusing on holistic development

Since stem subjects incorporate multiple disciplines, it plays an important role in creating a strong foundation for students to thrive in a technologically dominant world

SNEHA PRIYA

In this new age of technology, we are practically surrounded by computers day and night and they have become an integral part of our lives. Our consumption habits have also become dependent on technology, from online gaming to online streaming platforms.

This process of technological advancement was catapulted with the pandemic, many existing jobs were diminished and on the other hand, multiple technologically driven jobs were also created.

This challenge demanded a complete and dynamic curriculum, which was not present in the previous education system. Thus, the National Education Policy was introduced to inculcate coding and Science, Technology, Engineering, and Mathematics (Stem) education facets at a young

age to amplify technological exposure and create a new world of innovation.

Stem subjects are important for a strong fundamental foundation of children in the new world of technology. It incorporates multiple disciplines like coding, robotics, mechanical engineering, nuclear engineering, chemical engineering etc.

In today's world, where artificial intelligence-enabled smart speakers are at our disposal to answer our queries, the approach towards education has taken a shift from previously just being able to know the answers to a more holistic approach of knowing what all questions to ask and critically analysing a problem situation, when it arrives. With technological development comes the need for youth to be equipped with skills for critical thinking, technologically adaptive and evaluation skills to be able to ingest, interpret, evaluate and

familiarise oneself with the information in this new digital age.

Since all this is made easier with Stem education, its inclusivity in today's world is imperative. It helps youngsters to develop skills related to access, understand, and determine the merits and utilise the information that they are acquiring. They are taught how to solve problems by utilising their critical thinking skills in real-life situations. This encourages them to ask questions about not only their immediate surroundings but also the world at large and seek unique answers to these.

Learning with Stem is not just an old school learning process; it focuses on a holistic development of the students and opens the door to a vast array of opportunities for them. This is only possible because of its practical inclusivity, interactivity and the fun factor that it brings along with

learning through innovative projects, teamwork/group work and gamification of the learning process.

Techies and teachers believe that coding can be the game-changer and the new digital generation will be one of rational thinkers who will use analytical skills to anticipate and solve a problem. Coding is expected to help with the problem-solving skills in all facets of life, be it maths, science or humanities. Not just that, coding is also expected to make the new generation future-proof and ready for future jobs.

India is the third-largest start-up ecosystem after the US and China. It is also home to a myriad of start-ups in multiple sectors, and coding is one of the major driving forces for this growth. Coding holds the power to embrace development and boost economic growth as the industry has seen an evident rise at an exponen-

tial rate. There has been an exceptional improvement in coding start-ups and a gradual increase in its educational inclusivity. Moreover, the reliability on computer coding is also increasing rapidly in companies other than the technology sector and 10 out of the top 25 highest paid jobs are tech positions. Coders get a variety of options for their career choices as they can work in tech giants and can also easily get recruited at a hospital or manufacturing firm.

Coding is the game changer and it has catapulted the growth of our economy. From young game developers to young entrepreneurs, coding and Stem education is helping youngsters adapt to the new age of technology and achieve greater feats in their life.

Reduce learning deficit to boost education



SHOBHIT MAHAJAN

PROFESSOR, DELHI UNIVERSITY

WHEN asked about their feedback on the laboratory class in nuclear physics that I had been conducting online for a semester, a student, let us just call him Vijay, spoke up enthusiastically about how happy he was with the lab. This was surprising since we were only conducting online demonstrations of the experiments from the lab and the students were not getting any hands-on training. When I asked him what he found good about the lab, he said he was most excited about being able to see how a physics lab looked like from the inside.

This was surprising since this was a Master's level course. It turned out that Vijay had done his school and college in a small town in UP and all through, he had never even been inside a laboratory, leave alone conducted any experiment. What is worse, he said that there never were any classes held in his college and he only had to go to take the exams after self-study.

According to the latest All India Survey of Higher Education, there are 993 universities, 39,931 colleges and over 10,000 stand-alone institu-

tions in the country where over 3.7 crore students are enrolled. Out of these, almost 80% enrolment is for undergraduate courses and 16.5% of these are in the sciences. That makes about 5 lakh science students. Out of the colleges, about 60% or around 24,000 colleges are in the rural areas. What is even more interesting is that about 6,400 colleges have an enrolment of less than 100 students while only about 1,700 colleges have more than 3,000 students.

These numbers might look impressive. After all, the increase in the Gross Enrolment Ratio (GER) for higher education has been very creditable — it now stands at over 27%. A combination of expansion of institutions and provisions for reservations for OBCs and EWS has certainly made higher education more accessible as is evident from the figures. NITI Aayog now talks about a target of 50% GER in its documents.

However, numbers by themselves are meaningless unless we have some measure of the quality of education also. Vijay's experience with the private college in a small town in UP is by no means an outlier. Our experience with students who join Delhi University from institutions from across the country shows that the quality of undergraduate teaching in the sciences is extremely uneven. There are several reasons for this.

The infrastructure available in most institutions is sub-standard. The physical infrastructure of buildings, laboratories and libraries etc., or the non-availability of laboratory



The mushrooming of degree-giving institutions might be great for increasing enrolment, but without adequate resources, they are certainly not contributing to quality. Even with older, more established institutions, the paucity of funding has taken a toll in terms of expansion of human and physical infrastructure. Our spending on higher education is not only low but also concentrated on a small number of institutions.

BATTLING INEQUALITY: The increasing number of students in colleges and universities has no meaning unless quality of education can be ensured. FR1

equipment are all of course important factors. Far more serious is the paucity of good quality teaching resources. Proper teaching as well as training in laboratory techniques is more of an exception rather than a rule. Another major issue is the language of instruction. In many institutions, the language of instruction is usually the vernacular. The non-availability of good quality textbooks proves a major hindrance in the learning process. The absence of diligent teachers and good quality

textbooks proves to be a double whammy for the students.

Incidentally, the fact that Vijay, despite being a science student, did not do any laboratory work during his high school is not necessarily only because of lack of resources. Most schools, even the elite ones in metro regions, routinely do not expose their students to any kind of laboratory work. The fact that the board exams do not rigorously test laboratory skills makes it irrelevant for the schools, who consider it a

waste of time. Thus, most of the science students who are entering the university have minimal laboratory experience. Given the importance of experiments in science pedagogy, this proves to be disastrous.

The mushrooming of degree-giving institutions might be great for increasing enrolment, but without adequate resources, they are certainly not contributing to quality. Even with older, more established institutions, the paucity of funding has taken a toll in terms of expansion of

human and physical infrastructure. Our spending on higher education is not only low in absolute terms, but also concentrated on a small number of institutions. The obsession of our educational planners with the university rankings (which have been shown to be flawed and can be gamed) has led to a disproportionate amount of resources being lavished on a few select institutions. Schemes such as Institutes of Eminence only further exacerbate this inequality.

This is not to argue that one should not promote high quality. One should, of course, strive for as many institutions becoming world class as is possible. But it is also important to realise that unless we pay attention to the enormous learning deficit among the vast majority of our so-called scientific and technical human resources, the overall standard would still remain abysmal. For this, an enormous increase in the resources allocated is of course a necessary condition. However, it is by no means a sufficient one. One has to think of localised solutions to the problems faced by institutions. This is not going to come about by mandating standards sitting in the MHRD — there has to be empowerment and decentralisation for it to be effective.

Vijay, of course, has been lucky to have gained admission to a relatively better endowed institution. A vast majority of his peers are not so lucky. What is worse, they would go on to teach science to the next generation of students who would go on to do the same... and so it goes on. Meanwhile, the front page news is of some IIT rising by five ranks in the QS University ranking.

ऑनलाइन शिक्षा और चुनौतियां

नागेश्वर राव

इसमें कोई शक नहीं कि शिक्षा हासिल करने की इच्छा रखने वाली आबादी का बड़ा हिस्सा गरीब तबके से है। इनमें शहरी और ग्रामीण गरीब दोनों हैं। कंप्यूटरों की कमी और इंटरनेट की सुविधा का अभाव ऑनलाइन शिक्षा में बड़ी बाधा के रूप में उभरा है। नेटवर्क जैसी तकनीकी समस्या भी इसमें रोड़ा साबित हुई है। ऑनलाइन परीक्षाओं के आयोजन में भी अड़चनें कम नहीं हैं।

शिक्षा की सार्थकता से कोई भी इनकार नहीं कर सकता। देश को मजबूत बनाने के लिए महात्मा गांधी ने भी सबसे ज्यादा जोर शिक्षा पर ही दिया था। इसमें कोई संदेह नहीं कि पिछले तिहत्तर वर्षों में शिक्षा के क्षेत्र में भारत ने काफी प्रगति की है। अठारह से तेईस वर्ष के तकरीबन पौने चार करोड़ (करीब साढ़े सत्ताईस फीसद) छात्र-छात्राएं उच्च शिक्षा हासिल कर रहे हैं, उच्च शिक्षा संस्थानों की संख्या भी आशातीत रूप से बढ़ी है और देशभर में नौ सौ तिरानवे विश्वविद्यालय, चालीस हजार के आसपास महाविद्यालय और म्यारह हजार के लगभग निजी उच्च शिक्षण संस्थान हैं। लेकिन इसके बावजूद अठारह से तेईस वर्ष की सत्तर फीसद से ज्यादा आबादी उच्च शिक्षा की परिधि से बाहर है। देश के लिए यह एक बड़ी चुनौती है। इसका एक बड़ा कारण बच्चों का बीच में ही पढ़ाई छोड़ देना भी है। यह प्रवृत्ति लाखों बच्चों को उच्च शिक्षा से विमुख करती है। हालांकि इसके भी कारण हैं। अगर स्कूली शिक्षा से उच्च शिक्षा तक की बात करें तो बीच में ही पढ़ाई छोड़ देने की दर लड़कों की अपेक्षा लड़कियों की ज्यादा है। आर्थिक और सामाजिक कारणों के कारण बालिकाओं

को दूरदराज के स्कूल-कालेज में पढ़ने का अवसर नहीं मिल पाता। इसी संकट को दूर करने में ऑनलाइन शिक्षा बड़ी भूमिका निभा रही है।

यह तो अब साबित हो ही चुका है कि अगर ऑनलाइन शिक्षा का ढांचा मजबूत हो और सुगमता के साथ सब तक इसकी पहुंच बन जाए समाज में क्रान्तिकारी बदलाव लाया जा सकता है। कोरोना महामारी के काल में दुनिया का स्वरूप बदल गया है और व्यक्ति से लेकर समाज के हर क्षेत्र में यह बदलाव परिलक्षित हो रहा है। भविष्य में ये बदलाव और ठोस रूप लेते दिखाई देंगे। इन्हीं में शिक्षा और रोजगार भी हैं। आज देश में हम जिस आत्मनिर्भरता की बात कर रहे हैं, उसका अहम पक्ष शिक्षा से ही जुड़ा है। अच्छी बात तो यह है कि भारत के पास संसाधन और इच्छाशक्ति दोनों ही की कमी नहीं है। प्रधानमंत्री ई-योजना के तहत पचास लाख विद्यालयों और पचास हजार से अधिक उच्च शिक्षण संस्थाओं को डिजिटल बनाने की योजना बन चुकी है। जाहिर है, देश के करोड़ों नागरिकों को शिक्षित करने की दिशा में यह बड़ा कदम होगा। ऑनलाइन शिक्षा को बढ़ावा देकर हम दुनिया के सामने मिसाल कायम कर सकते हैं। भारतीय संस्कृति में शिक्षा से जुड़े ऐसे कई आयाम हैं जिन पर अब तक कोई पाठ्यक्रम नहीं बने हैं।

राष्ट्रीय शिक्षा नीति-2020 के अंतर्गत ऑनलाइन शिक्षा के माध्यम से उच्च शिक्षा को नई दिशा देने के प्रयास किए गए हैं। अब शिक्षा में ज्ञान और कौशल के सांमजस्य पर जोर होगा। नई शिक्षा नीति में विभिन्न विषयों को एकीकृत करने का प्रयास किया जाएगा। राष्ट्रीय आवश्यकता को ध्यान में रखते हुए नई शिक्षा नीति में सकल नामांकन अनुपात को पचास फीसद से ज्यादा तक पहुंचाने का लक्ष्य रखा गया है। साथ ही देश में गुणवत्तापरक शिक्षा का दायरा भी बढ़ाने पर जोर है। इसके लिए ई-पुस्तकालय और स्वयंप्रभा इत्यादि विषयों पर एक सुव्यवस्थित शिक्षण व्यवस्था स्थापित करने का प्रयास चल रहा है। स्वयंप्रभा नामक यह प्रयास 2016 में शुरू हुआ था, जिसमें लगभग तीन हजार विषयों की पाठ्यसामग्री उपलब्ध है। यह सामग्री अभियांत्रिकी, तकनीक, समाज विज्ञान, मानविकी, शिक्षक शिक्षा आदि विषयों से संबद्ध हैं। इस तरह की पाठ्यसामग्री के विषय वार निर्माण के साथ-साथ स्वयंप्रभा के तीस से ज्यादा चैनलों द्वारा शिक्षा का प्रसार करने का प्रयास किया गया है। इन विषयों के वीडियो व अन्य सामग्री देश के प्रतिष्ठित विद्वान और विषय विशेषज्ञ तैयार करते हैं। इस

प्रकार के विषयों के अध्ययन के लिए कोई भी व्यक्ति किसी भी विषय में वर्ष में दो बार प्रवेश ले सकता है। यह प्रवेश निशुल्क है। इसमें डिजिटल पाठ्य सामग्री के साथ-साथ वीडियो द्वारा शिक्षण व्यवस्था होती है। चर्चा का भी आयोजन किया जाता है। यह शिक्षण व्यवस्था अत्यंत लोकप्रिय साबित हुई है। इस प्रकार ऑनलाइन शिक्षा का यह प्रयास राष्ट्रीय शिक्षा नीति के बहुविषय नीति की ज्ञान परंपरा को बढ़ाने में महत्वपूर्ण भूमिका निभा सकता है। इससे शिक्षार्थी पर आर्थिक भार भी ज्यादा नहीं पड़ेगा और उसे घर बैठे गुणवत्तापरक शिक्षा उपलब्ध होगी।

परंपरागत शिक्षा व्यवस्था की कुछ मूलभूत अड़चनों का नुकसान हमें उठाना पड़ा है। तमाम उच्च शिक्षा संस्थानों में नामांकन उच्च प्रतिशत पर ही बंद हो जाता है और लाखों छात्रों को दाखिला नहीं मिल पाता।



उदाहरण के तौर पर दिल्ली विश्वविद्यालय के ही कुछ कॉलेजों को लें जहां दाखिला निन्यानवे प्रतिशत अंकों पर बंद हो जाता है। देश के तमाम प्रतिष्ठित कॉलेजों की स्थिति भी ऐसी ही है। ऐसे में सवाल उठता है कि बाकी छात्र कहां जाएं, खासतौर से आर्थिक और सामाजिक रूप से पिछड़े समाज के बच्चों के लिए तो और गंभीर संकट है। आखिर गरीब तबके का कोई भी विद्यार्थी कैसे अच्छे संस्थानों में पढ़ पाएगा। बेहतर शिक्षण संस्थाओं की प्रामाणिकता अच्छे शिक्षण से ही बनती है। ऐसे में ऑनलाइन शिक्षा ही वह माध्यम है जो इस समस्या का समाधान करती है। ऑनलाइन शिक्षा दाखिले की नकारात्मक सोच को ही बदल देती है। इसमें दाखिले का एकमात्र आधार ज्ञानार्जन की इच्छाशक्ति होता है।

भारत की आबादी विशाल है। अगर कक्षा और ब्लैक बोर्ड तक ही शिक्षा सिमटी रही तो लाखों बच्चे

गुणवत्तायुक्त उच्च शिक्षा से वंचित रह जाएंगे। करोड़ों विद्यार्थियों के लिए कालेजों और विश्वविद्यालयों का भारी-भरकम तंत्र खड़ा करना अत्यंत खचीला और चुनौतीपूर्ण काम है। इसलिए यहां ऑनलाइन शिक्षा प्रासंगिक हो जाती है। ऑनलाइन शिक्षा व्यवस्था पर अमेरिकी शोध संस्थाओं की रिपोर्टें भी इस बात की पुष्टि करती हैं। कई आंकड़े भारत के पक्ष में हैं। दुनिया में अगले एक दशक में कामगारों की सबसे बड़ी जमात भारत में ही होगी और इसमें सत्रह से पैंतालीस साल के बीच के लोग ही होंगे। इसलिए भारत सरकार की योजना 2035 तक उच्च शिक्षण संस्थाओं में छात्रों की संख्या के आंकड़े को पचास प्रतिशत तक पहुंचाने की है, जबकि विकसित देशों में यह आंकड़ा अस्सी से नब्बे फीसद के बीच है। अहम सवाल यह है कि क्या

परंपरागत शिक्षा व्यवस्था के द्वारा यह आंकड़ा प्राप्त किया जा सकता है। दरअसल ऐसा होना संभव नहीं दिखाई देता, क्योंकि देश में हजारों कॉलेज और विश्वविद्यालय के बनाए जाने के बाद भी बड़ी संख्या में बच्चे स्कूली शिक्षा के उपरांत कॉलेज तक नहीं पहुंच पाते। इसीलिए आज ऑनलाइन शिक्षा को सार्थक और बेहतर विकल्प के रूप में देखा जा रहा है। हार्वर्ड विश्वविद्यालय की एक रिपोर्ट में इस बात की तस्दीक की गई है कि ऑनलाइन शिक्षा प्रणाली में शिक्षा और मूल्यांकन कहीं ज्यादा गुणवत्तापूर्ण रहा है। शिक्षक के लिए भी विद्यार्थियों के साथ अकादमिक संपर्क ज्यादा सशक्त ढंग से होता है। पिछले कुछ वर्षों में भारत के ज्यादातर ग्रामीण इलाकों तक इंटरनेट की पहुंच बनी है। भारत ब्रॉडबैंड मिशन के तहत अगले साल यानी 2022 तक देश के हर गांव और शहर को इंटरनेट से जोड़ दिया जाएगा।

ऑनलाइन शिक्षा की राह में और भी अड़चनें हैं। इसमें कोई शक नहीं कि शिक्षा हासिल करने की इच्छा रखने वाली आबादी का बड़ा हिस्सा गरीब तबके से है। इनमें शहरी और ग्रामीण गरीब दोनों हैं। कंप्यूटरों की कमी और इंटरनेट की सुविधा का अभाव ऑनलाइन शिक्षा में बड़ी बाधा के रूप में उभरा है। नेटवर्क जैसी तकनीकी समस्या भी इसमें रोड़ा साबित हुई है। ऑनलाइन परीक्षाओं के आयोजन में भी अड़चनें कम नहीं हैं। भाषा को लेकर भी समस्याएं हैं। ऐसे में जब तक तकनीकी ढांचा मजबूत नहीं बनेगा और हर व्यक्ति के पास कंप्यूटर, स्मार्टफोन और इंटरनेट की सुविधा नहीं होगी, तब तक ऑनलाइन शिक्षा का सपना साकार नहीं होगा।

(लेखक इग्नू के कुलपति हैं)

A move towards self-reliance in the education system

Integrated academic programmes are needed to provide supplemental support to teaching and learning in various disciplines, making it relevant in current circumstances

Globally, the post-modernisation phase has been marked by a period of substantial change in the contents and nature of education and examination processes. Therefore, it is required that the focus should be on demonstrating how new models of reform and education can be used in real life experiments with democracy, the environment, globalisation and governance. There's a need to show how new ways of higher education will drive change and instill confidence among the masses and explain how latest research and happenings in the field of education across the globe can be disseminated so as to upgrade research and teaching accordingly.

Plus, we have to find ways to do away with manipulation and nepotism; ensure policy brings good change and frame ways to reform the examination



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system to ensure that only talent gets selected.

The higher education system's recent attempt to ensure a high level of partnership among institutions through equity and access to all, shows the level of insight in empowering and motivating students and faculty members across the board. Besides, the pursuit of the National Education Policy (NEP) to cover school, adult, higher education and efforts towards promotion of Indian languages and online education exhibit tremendous effort towards enhancement of the overall educational scenario. The sum and substance of the argument is to ensure that the new educational changes have brought in clean governance and accountability in education through a fresh perspective and a framework for key demands of higher education, while maintaining a synergy

among various stakeholders, particularly the youth. The provision to lay norms for designing new required structures is to ensure affordability to social justice. It goes without saying that many positive changes have been ensured through positive perspectives.

Another welcome regulation is to monitor institutes mainly on the basis of research, academic excellence, its linkages and employability. There appears to be a clear framework of defining how the process of segregation of monitoring and financial powers in opening and shutting down of an institute would ensure transparency in the decision-making process. There have been lots of arguments among academicians about selection in higher education; and in this regard perhaps the main challenge is the pattern of selection in the contemporary context of increasing



international, inter-dependence and global change.

Recent developments have established a new basis for understanding the changing nature of polity and community. Perhaps there may be some modification in the examination system without which the process of reform may only remain a chimera. We ought to bring in changes to test the potential of students by testing the ability not only on academic excellence but also by judging their ability and knowledge about new information and

comprehending their level of social responsibility. The strength of the higher education system lies in creating its internal dynamism by ensuring inclusive growth. Even an excellent system is influenced by the people who make a difference. Human and financial relations and dealings are not as simple as they appear to be and require constant monitoring by competent authorities.

The provisions of Multidisciplinary Education and Research Universities (MERUs) on par with the IITs, IIMs, the National Research Foundation, the National Educational Technology Forum and Indian Institutes of Translation and Interpretation would create an environment for students to reach their potential by encouraging academic excellence of a global level, embracing new information on the one hand and

opening new areas of job-oriented courses on the other.

Besides, it would help in understanding social responsibility. In addition to this, a new approach can also provide a clear way forward for students in multidisciplinary studies. Tremendous efforts have been made for making the entire apparatus of higher education foolproof, yet there are always a few takeaways to new vistas of aggrandisement and making the entire process low cost and more people-intensive.

There is always scope to improve course contents through academic discourse by bringing about changes through cognitive discourse, plus seeking multiple options and viewpoints in order to help in forming an integrated team consisting of only meritorious members for holistic development of social sciences.

Plus, there is a need for

introducing new innovative mechanisms in social sciences designed to help students identify career goals available in the field of social sciences.

More integrated academic programmes and services are needed that provide supplemental support to both teaching and learning in numerous and diverse disciplines making it more relevant in the current circumstances.

Growth and enrichment of students and the community, both inside and outside of the classroom through community development exercise; more research centres to ensure academic excellence in many disciplines; exclusive intellectual skills designed to prepare students to engage in nuances of socio-economic and political issues related to the global order are the way forward to help our students carve out a niche for themselves.

भारतीय भाषाओं में पढ़ाई

शिक्षा से जुड़े एक वेबिनार में प्रधानमंत्री ने प्राइमरी से लेकर उच्च शिक्षा तक भारतीय भाषाओं में पाठ्यसामग्री तैयार करने की जो जरूरत जताई, वह नई शिक्षा नीति के अनुकूल ही है। प्रधानमंत्री का वक्तव्य इसकी पुष्टि करता है कि सरकार भारतीय भाषाओं को बढ़ावा देने के लिए प्रतिबद्ध है, लेकिन यह आसान काम नहीं। इसलिए नहीं, क्योंकि उच्च शिक्षा के स्तर पर पढ़ाई के लिए भारतीय भाषाओं में स्तरीय पुस्तकें तैयार करना एक बड़ी चुनौती है। इस चुनौती को पार किए बगैर देश के विभिन्न हिस्सों में छात्रों को उनकी अपनी भाषा में उच्च शिक्षा प्रदान करने का लक्ष्य हासिल नहीं किया जा सकता। यह भी ध्यान रहे कि इस लक्ष्य को हासिल करने में वह वर्ग बाधक बन सकता है, जिसने अंग्रेजी को श्रेष्ठता बोध से जोड़ दिया है। इस वर्ग ने यह माहौल भी बना दिया है कि आधुनिक जीवन की भाषा तो अंग्रेजी ही है। आवश्यक केवल यही नहीं है कि प्राइमरी से लेकर उच्च शिक्षा तक की पढ़ाई भारतीय भाषाओं में दी जाए, बल्कि यह भी है कि स्कूली शिक्षा के स्तर पर अंग्रेजी के वर्चस्व को तोड़ा जाए। अंग्रेजी एक भाषा के तौर पर तो पढ़ाए जाने की जरूरत है, लेकिन इसके नाम पर जिस तरह उसे पठन-पाठन का माध्यम बना दिया गया है, उससे मुक्ति पाने के ठोस प्रयास करने होंगे।

अंग्रेजी की महत्ता से इन्कार नहीं, लेकिन केवल उसे ही तरक्की की भाषा मानने का कोई औचित्य नहीं। आखिर जापान, जर्मनी, फ्रांस, दक्षिण कोरिया आदि देशों ने अपनी ही भाषा में प्रगति की है, न कि अंग्रेजी के बल पर। संपर्क भाषा के तौर पर भी अंग्रेजी का महत्व है, लेकिन इसका यह मतलब नहीं कि वह अन्य भाषाओं पर राज करे। स्कूलों से लेकर विश्वविद्यालयों तक की पढ़ाई भारतीय भाषाओं में कराने की मुहिम तब आगे बढ़ेगी, जब इन भाषाओं को शिक्षा संस्थानों से इतर भी महत्ता मिलेगी। आखिर अधिकाधिक सरकारी कामकाज भारत की भाषाओं में क्यों नहीं हो सकता? सवाल यह भी है कि हमारी अपनी भाषाएं न्यायपालिका की भाषा क्यों नहीं बन सकती? क्या इससे बड़ी विडंबना और कोई हो सकती है कि उच्चतर न्यायपालिका में लोग अपनी भाषा में न्याय भी हासिल नहीं कर सकते? क्या कारण है कि संसद में पेश किए जाने वाले विधेयक मूलतः अंग्रेजी में तैयार करने की बाध्यता है? स्पष्ट है कि भारतीय भाषाओं में पठन-पाठन के कदम उठाने के साथ भारतीय भाषाओं की उपयोगिता बढ़ाने की जो जरूरत है, उसकी भी पूर्ति करनी होगी। यह भी समझा जाना चाहिए कि अंग्रेजी के नाम पर अंग्रेजियत की जो संस्कृति पनप गई है, वह भारतीय भाषाओं के विकास में बाधक बन रही है।

Meera Srinivasan

When a bunch of young film enthusiasts in northern Sri Lanka decided to build a library of cinema, they were certain about two things. Their resources would not be limited by geography, language, or culture. And, the library would be named after one of their own.

The opening of the Balu Mahendra Library in Kilinochchi last December reflected precisely that spirit. Iranian filmmaker Majid Majidi, Sinhala filmmaker Prasanna Vithanage, director Bharathiraja from India, and senior Sri Lankan Tamil theatreperson Maunaguru Sinniah, among others, spoke about Mahendra at the virtual inauguration. The diverse guestlist was not incidental.

Mahendra, who hailed from eastern Batticaloa, worked in the island nation's dominant Sinhala film industry as a young technician, before his formal training in Pune. He went on to become one of South India's most admired film icons, with technique that many compared to the best in world cinema.

For those who conceived the library, it all began with a workshop called 'Pattara' – incidentally, the name of Mahendra's film school in Chennai – in May 2020, at the height of the pandemic. Under a stringent lockdown, a group of youngsters, mainly from war-affected districts in the island's north and east, put together a series of interactive, virtual sessions with senior technicians and artists, with support from the University of Jaffna. Over 600 film buffs from across Sri Lanka – and a few from Tamil Nadu – signed up. The resource persons spanned continents and genres – from Prasanna Vithanage, Vijay Sethupathi, Nasser, Nalan Kumarasamy, Lenin M. Sivam to Balaji Sakthivel, Poornima Ramasamy, Ghibran and Ranjith Joseph.

The workshops went on for four months, leaving participants with one key takeaway. "It made us realise you can't simply watch TV or films and become a filmmaker. Not everyone with a camera can become a cinematographer. These skills come with focused learning, training, and thinking. We realised we didn't have the resources for that and that's how the idea of a library was born," says Ramya Deron, pre-



SPOTLIGHT

From movies to books

A cinema workshop pushed a bunch of young Sri Lankan film buffs to set up a resource library named after their icon, Balu Mahendra

sident of the Balu Mahendra Library. Until 2009, when Sri Lanka's civil war ended, Kilinochchi district in the Tamil-majority Northern Province was best known as the administrative capital of the LTTE. Post-war, it is a busy town where residents try hard to revive its economy and their livelihoods. Government-built war monuments dot the A9, the main highway to the north from capital Colombo. Off the main road are villages where mostly Tamils live, braving the aftermath of the war. The Balu Mahendra Library, opened just weeks before his seventh death anniversary last month, is housed on the first floor of an old building belonging to a cooperative society.

Laid the foundation

"We thought a lot about the library's name, and felt it had to commemorate Balu Mahendra sir, who was from Batticaloa. He went to a thriving film industry in South India and made a mark with his creativity and technical brilliance. That is no small accomplishment," says Ramya.

Mahendra's decision to go to India in the late 60s was completely understandable, says Vithanage, the acclaimed Sinhala filmmaker. Although many popular producers, distributors and theatre owners in Ceylon back then were Tamils, the predominantly Sinhala film landscape gave little room or recognition to Tamil technicians, he says. "Even now, in this Sinhala-Buddhist majority context, it is not easy for mainstream Tamil filmmakers to make the films they want for theatrical release. Balu Mahendra tried working here but soon realised he couldn't do much. That is why he left for Pune Film Institute." With a recommendation letter from no less than Lester James Peries, a pioneer Sinhala filmmaker, called "the father of Sri Lankan cinema".

Soon, other technicians followed suit and built successful careers in India, but few know



they are from Sri Lanka, says Ramya. "For us, it is inspiring to think that someone from our country went to India and became a trailblazer."

Like others in her team, Ramya, a 20-year-old software engineer, volunteers her time to manage the library. "We dream of building a distinct Eelam [Tamil name for Sri Lanka] Tamil film identity, and we could not think of anyone but Balu Mahendra sir as our icon, and as our film identity."

Not long after entering the Indian film world, Mahendra's work was noticed. "He did not try to merely fit in; he began telling stories on his own terms," says Vithanage, recalling the experience of watching *Azhayatha Kolangal* (1979) in Colombo and "being stunned" by the film's sensibility. "With the limited technology of that time, his storytelling was so close to life. It opened a new vista in filmmaking," he says, citing *Veedu* (1988) and *Sandhya Raagam* (1989) as other inspirations.

Mahendra may have not worn his Sri Lankan identity on his sleeve, but much of his inspiration appears to have come from his formative years on the island, although it was not confined to that. He has spoken of watching David Lean make *The Bridge on the River Kwai* in Sri Lanka's scenic hill countryside, during a school trip, and being drawn to filmmaking that day.

Theatreperson Maunaguru Sinniah, who grew up with Mahendra in Amirthakali village in Batticaloa, traces other influences. "His father Balanathan was a popular maths teacher in our village. It is his name that Mahendran *annan* (elder brother) took on as his first name later. *Annan* was a quiet but intent observer of life. When I watched *Veedu*, I was reminded of the difficulties his father faced while building their stone house in our village," he says. *Azhayatha Kolangal*, too, transported him back to their school days.

Growing up, Mahendra was not attracted to any of the political ideologies dominating the region when Sri Lanka's ethnic conflict began to brew. "He was more interested in arts and literature. He observed people and tried to understand the lives they were leading," says Sinniah. Once, a man was found drowned in

the pond near the village temple. The entire village gathered to see the body. "We were very sad to see that person lying lifeless. I vividly remember *Annan* telling us: 'How many dreams this man would have had'. It affected him very much."

Strong women

Years later, Mahendra's films stood out for capturing human relationships and emotions with rare honesty. "He was especially good at sensitively portraying the dynamics of male-female relationships. Tamil society prides itself in being morally righteous, defining culture and values in very rigid ways. *Annan's* films zoomed into the complexity of human relationships, without being judgemental," Sinniah notes.

Vithanage also finds Mahendra's writing of women characters "remarkable". "Look at Shoba in *Azhayatha Kolangal*, Archana in *Veedu* or Revathi in *Marupadiyum*. They were so different to the women portrayed in other films at the time. They had agency, they were decision makers," he says.

The newly launched library so far has received over 10,000 books and DVDs from writers and filmmakers abroad and in Sri Lanka. Mahendra's family too has made a sizeable contribution, even as the young volunteers running the library explore funding options.

Meanwhile, the team is also trying to expand its network within the island, getting not only Tamil youth from the north and east, but also Tamil-speaking Muslims from the north, the ethnically diverse Eastern Province, as well as Malayala Tamils from the island's central and southern hill country. "We are keen on evolving a distinct Tamil cinema idiom in the island, but we want to tell stories from all over the country, not just from the north or east," says Ramya. Going forward, the team wants to make their resources accessible in rural Sri Lanka, through mobile libraries. "We also want to screen the classics in our villages."

For now, they meet every weekend to watch the classics. Apart from aspiring filmmakers and technicians like themselves, they have even had their curious milk vendor and other local people join some sessions. Heated discussions follow. The group has a sizeable number of young women. "We are particular that women get a chance to learn about being technicians in cinema, and not be confined to acting careers," says Ramya. *Annan* would have liked that.

Mahendra's films stood out for how human relationships and emotions were captured with rare honesty. He was especially good at sensitively portraying the dynamics of male-female relationships



Icon remembered (Clockwise from left) The Balu Mahendra library in Kilinochchi; Ramya (centre) with the core team running the library; and Balu Mahendra. • SPECIAL ARRANGEMENT

OFF-CENTRE

Until last year's lockdown, Laxman Rao, novelist and playwright, still sold chai from his stall in Delhi

Writing the tea leaves

Nehal Ahmed

India's capital is home to a famous *chaiwala*. A darling of the press, fêted by numerous organisations and no stranger to the highest echelons of political office, Laxman Rao has led a storied life. It wasn't his brews but his books that catapulted him into the public eye, and even into Teen Murti House, where Indira Gandhi hosted him in 1984. A few decades down the line, then President Pratibha Patil also had the honour. Now the author of 25 Hindi books, he's received awards from NGOs and literary associations and been covered more than 100 times in print, broadcast and digital media. All the while, until Delhi went into lockdown last year, you could still walk right up to a tea stall on Vishnu Digambar Marg and treat yourself to a cuppa from this celebrated author.

The pandemic brought change and, in its own way, peace. Rao's sons were doing well, so he could quite happily wrap up the tea business and focus on writing and promoting his works. Several are now available on online shopping sites and Kindle. And currently in the works is a *Mahabharata*-based play called *Hastinapur*. It's an epilogue to the epic that aims for contemporary relevance, with an emphasis on "diagnosing and redressing the moral dilemmas of our times," he says. It has a focus on Karna, a "great warrior, a great human being and a great friend" who Rao feels has been given short shrift by recent adaptations.

The tea stall is still there – it's his correspondence address and office space-cum-bookshop. "Literature



needs time to flourish; that's why I needed to sell tea," he says. And time it took. Rao started his rags-to-writer journey in 1975, when he left his village with ₹40 in his pocket – borrowed from his father – and a dream to make it big as an author in Delhi. He opened a paan shop on Vishnu Digambar Marg in 1977, and later diversified into tea.

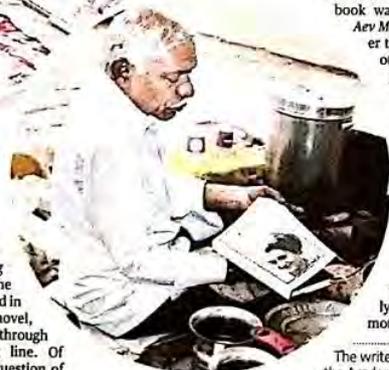
Leisure reading

The shop was near Delhi's old book market, and he used to grab books by authors ranging from Lenin to Shakespeare to read when there was

He completed his Class XII in Delhi aged 37, got a degree from Delhi University at 50 and an M.A. in Hindi literature from IGNOU at 63 – and is still planning to do a Ph.D

a lull in business. This was also when he encountered the works of one of his inspirations, the novelist and Bollywood scriptwriter Gulshan Nanda. Next year, Rao was ready to try his

luck. He approached publishers with two manuscripts and met rejection after rejection. "One publisher said, 'get out,' and that day I decided I would publish on my own. I thank him for rejecting me." He worked hard at the shop, saved up ₹7,000, and in 1979 launched his first novel, *Nai Duniya Ki Nai Kahani*, through his own self-publishing line. Of course, it wasn't just a question of publishing; at first he had to go



Books and brews Laxman Rao at his tea-cum-bookstall; and (below) with a copy of his play *Pradhanmantri*.
• MD IMRAN RAZA

around on his bicycle delivering copies to schools, libraries and railway stations. He had little success initially, but *Pradhanmantri*, the play he wrote after meeting Indira Gandhi, brought him instant fame.

Origin story

For Rao's literary origin story, we have to flash back even further to a little village called Talegaon Dashaar in Maharashtra's Amravati district, where he was born in 1952. His senior at school, a reformed ruffian named Ramdas, dived into a river to bathe and never came up again. "The memory would gestate in Rao's mind until 1992, when Ramdas became the novel *Ramdas* – his third and most successful book, with more than 5,000 copies sold to date. "My writing is not protest at all against any incident, but it must be inspiring. It is mostly my imagination on the basis of some fact that passes by me. I always live in present and write fictional literature," he says.

Rao feels it's been smooth sailing since 2000, when he was given an award by the *Bhartiya Anuvad Parishad* and his career really took off. Recently, he has widened his scope to write about subjects like politics and economics; his last published book was *Bhartiya Arthashastra*

Aey Maulik Sidhant in 2018. Over the years, he's worked on other things too; he completed his Class XII in Delhi aged 37, got a degree from Delhi University at 50 and an M.A. in Hindi literature from IGNOU at 63 – and is still planning to do a Ph.D. What does the future hold? "I've become a Gulshan Nanda as I wished, and now I want to be Shakespeare. I don't want to sell tea anymore – I only wish to write and promote my works," he says.

The writer is a research scholar at the Academy of International Studies, Jamia Millia Islamia.

FIRST COLUMN**EMPOWERMENT
BEGINS AT HOME**

Parents have to walk the talk and drive home the point that the girl child is no different from her male sibling



RAVI CHANDER **KOCHHAR**

Women's empowerment has often been a buzzword and the central theme of numerous seminars, webinars and panel discussions in the recent past. This is more so as International Women's Day, which is celebrated on March 8, approaches. At every such forum, it has been emphasised that a woman must have the courage to stand up and make her presence felt to ensure that she gets her due in every walk of life, be it her family, educational institutions or the workplace. All stakeholders, including the Government and society must play their respective role in ensuring women empowerment, for nurturing and effectively taking women on board for nation building.

Here, rather than mere formulation and enactment of various policies and provisions, society has a much more important role to play in achieving the desired outcome. If you study life histories of those who have made a mark in society, they follow a certain pattern with commonalities including their upbringing, education and career profile, further signifying the impactful role societies play in women's empowerment.



As it is said, "charity begins at home", the starting point for women's empowerment is within the family where each sibling must be given equal opportunity all through their formative years. In this regard, parents can play a very important role and both mother and father have to walk the talk and consciously drive home the point among the children that the girl child is no different and doesn't have to be treated differently.

The second stage which equally influences the mindset of the young generation towards the principles of gender equality and women empowerment is at the educational institutions. It is here that they come out of their homes and join peers of both genders. These children are under the mentorship of their teachers and the onus lies with the schools and colleges to ensure that the girl child is given a fair chance at every level, not only in academics and research but in all other extracurricular activities as well. It is up to the management to ensure an equal opportunity to all. There should be no discrimination in the selection process and every male and female candidate should be given a fair chance. Thereafter, all through their career, it must be ensured that women are given opportunities at par with their male counterparts and assessed on the same parameters for professional appraisal and promotions. It is also the responsibility of the management to create a conducive work environment devoid of any form of discrimination.

Further, considering the special needs of women and the biological differences with men, maternity and other leaves should be granted at the appropriate time. On the other hand, women must not take any undue favour or advantage and must climb the ladder of success on their merit. Be it professional, administrative, or interpersonal relationship, women must move with confidence. They must prove themselves as competent, committed and self-motivated. Moreover, there is a need to change the male mindset and men must understand that in today's competitive world with the ethos of gender equality at the helm, if any woman is better, they must accept the fact, learn to respect her authority and take orders from a female boss. Remember there are no free lunches and every opportunity comes with a price tag. The question is whether you are ready to pay the price!

(The writer is Group Pro Vice Chancellor, Amity University, Uttar Pradesh. The views expressed are personal.)

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Despite the temporary setback due to Covid-19, study abroad continues to be a valid aspiration. Students currently pursuing academics in Canada, USA, Australia, New Zealand, etc., are among the beneficiaries of the superior education infrastructure and boundless opportunities that these nations offer.

Canada has emerged as the most popular destination among Indian students over the years. Statistics Canada data reveal that Indian-Canadians make up the second-largest non-European ethnic group in the country. Why Indian students are going to Canada rests on factors like top-notch universities, liberal visa policies, great job opportunities, and above all, Canada's inclusive culture.

The country recently announced several measures to support international students. One of them is allowing international students to complete their entire programs online from their home countries and still qualify for a Post-Graduation Work Permit (PGWP).

A DIVERSE AFFAIR

"Compared to 10-15 years ago, students now are more exposed to opportunities abroad. This is also because schools and parents are actively engaging youth in foreign trips. Secondly, the aspirations of Indian students have gone beyond conventional jobs. Now they want hefty packages, a great lifestyle and global work culture, and easy and effortless path to success. Gone are



PHOTOS: ISTOCK

Brighter Prospects Ahead

World-class education, lucrative job prospects, and diverse culture make Canada, a great study destination for Indian students

the days when students struggled for about 10 years before they found their foothold. Moreover, studying abroad somewhat assures a great lifestyle for many young aspirants," says Jitin Chawla, a career counsellor.

The Indian students in Canada endorse the comfortable and progressive way of life in Canada. The country hosts people from different race, ethnicity, religious beliefs, socioeconomic status,

language, geographical origins, backgrounds, experiences, and interests calling for a diverse community.

"The local population of the country is an amicable lot. I feel comfortable here, it feels like a home away from home. Canada Government has strict laws against racism, and it respects all individuals, irrespective of colour or language," shares Aishwarya Pandey, a 24-year-old research scholar.

education system in Canada is mostly practice-oriented, and provides a favourable environment and lucrative incentives to carry out various research

OPPORTUNITIES GALORE

Indian students in Canada vouch for its social and economic infrastructure. Better lab equipment and research incentives apart from the salary packages give students a professional edge over many others from around the world. Students in Canada get to participate in many international conferences being organised here. This opportunity offers students an invigorating experience broadening their horizon.

The Canadian universities offer practice-oriented learning and provide a favourable environment along with lucrative incentives to carry out research. "The courses are similar to the ones we have in India, but what makes them different and better is how they are pragmatically delivered. Pursuing the same course in India as a Junior Research Fellowship scholar would not offer a good stipend unlike here. I am fortunate and happy to be pursuing my dreams in this country," says Anisha, another student studying in Canada.

Canada's industry-oriented education, diverse culture, a great level of well-being, all make Canada a popular destination to pursue education with great returns, be it resources or experiences.

According to experts, post-study work visas, better prospects of permanent residency after study, post-study work visa, immigration-friendly governments, encouraging local environment for international students, hassle-free and quick process of student visas are some of the deciding factors for Indian students looking forward to studying in Canada and other nations.



Independent research holds the key to Aerospace Engineering

University of Sheffield in the UK has industry tie-ups with Boeing and Rolls-Royce



c-Puniti.Pandey
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For 21-year-old Parth Bhatt, who had always been passionate about aviation and space, narrowing down to the University of Sheffield in England to pursue Aerospace Engineering had not been a difficult task. Parth chose the university for its reputation, global ranking and quality of research along with close industry partnerships. "UK universities are known for their world-class research and exceptional courses. Sheffield is ranked as one of the top institutions for engineering in the UK. The university also has close collaborations with industry partners such as Boeing and Rolls-Royce. The course offers flexibility to tailor the degree and specialise in subjects that suits one's strengths and interests," says the Surat boy. Parth is currently pursuing the final year of the course which is a five year long combined master's programme.

Course structure

The curriculum includes a proportionate blend of lectures, tutorials and lab sessions, says Parth. There is an extensive focus given on independent research and the degree also includes a year-long internship. "The curriculum includes group projects. For instance, I designed, manufactured and tested a fixed-wing UAV with autonomous flight and surveillance capabilities as a part of a year-long project. To inculcate practical knowledge among the students, the teachers keep up with recent industry developments and incorporate the latest information in their teaching material. The degree programmes thus integrate well with industry," he says.



I designed, manufactured and tested a fixed-wing UAV with flight and surveillance capabilities as a part of a project



Application process

The application process at Sheffield is similar to the procedure followed in most of the colleges in the UK for undergraduate courses. The application is submitted through the University and Colleges Admission Service (UCAS) where the students have to select the subject and university of their choice. A personal statement describing student's motivation on the subject is also required. The minimum requirement for admission is 80-85% in all core subjects in class XII, adds Parth.

For students who are keen on studying abroad, Parth advises them to follow a regular schedule

and to track the progress consistently. "Being independent for the first time could be tempting and



STUDENT SPEAK

could lead to distractions that could drift students away from their goals. A simple technique that I learnt while studying at the university was to create a schedule/work plan and to keep working on it week after week," he adds.

Consequences of the pandemic

The pandemic has greatly impacted the aviation sector and has shattered the plans of many aspirants. However, Parth hopes to employ his skills and knowledge earned throughout his study at Sheffield to overcome the impact.

International students to get more consumer power

US, UK and Australian universities that depend heavily on international student fee income, will be working harder and competing with each other to recruit the students, writes **Phil Baty**

The current health crisis has significantly shaken up the traditional global higher education ecosystem in many ways – from the delivery and cost of degrees, through the emergence of new, credible alternatives to universities, through major geopolitical shifts in the knowledge economy as traditionally strong western institutions are disproportionately harmed by the crisis and its economic fallout. But the key change that will perhaps have the biggest impact for Indian students keen to study abroad will be the fall in the overall number of international students. The number of internationally mobile students will be depressed by the crisis, certainly in the short to medium term, and perhaps also in the longer term too, as students re-think their options after this period of extreme disruption. Major universities in the most popular destination countries for students, particularly those in the US, UK and Australia which depend heavily on international student fee income, will be working harder, and competing with each other to recruit international

students. This may help put students and their families in the driving seat, giving them more consumer power, and potentially increasing their choices.

Rapid rise in remote learning

The rapid rise and development of capabilities in online, remote learning will get a wider range of options for international students. This could open up access to a range of prestigious institutions that may previously have been out of reach to many students, through



There is a sense that a decade worth of development towards online learning has happened in just a few months due to COVID-19



cade worth of development towards remote, online learning has happened in just a few months due to the pandemic. There will be rapid technological progress to ensure that online learning delivers great outcomes for the students.

Physical movement stopped

Movement of faculty and students has dropped due to the pandemic and rise in nationalism and even racism in response. While flights have been grounded and countries locked down, there has been a truly global collaboration among the world's universities to develop the treatments and ultimately, a vaccine for the virus. This crisis has shown that universities are the key to solving not just this crisis, but many of the world's shared grand challenges. This means that the leading universities will stay global in their focus, and will continue to share and collaborate across borders, and will always welcome talent from across the world.

(The author is chief knowledge officer, Times Higher Education, London)

the cost of traditional, on-campus learning, travel and the tough and often prohibitive visa processes. Students in India will find that the Times Higher Education (THE) World University Rankings offers the biggest and most comprehensive view of global higher education to date –

with more than 1,500 institutions from 93 countries evaluated across 13 gold standard performance metrics. The options presented by the rankings can be the most promising ever.

Year of innovation

There is a sense that perhaps a de-



Foreign graduates get 70 points for work permit in Taiwan

International students aiming to work need to inform their university, which then applies for a work permit on their behalf

TIMES NEWS NETWORK

For someone considering studying abroad, available job options can be a major factor while making the decision. In Taiwan, there are many jobs for foreign graduates and students who wish to work and study at the same time. International students who wish to work in Taiwan, are required to inform their university, which then applies for a work permit on their behalf. But the maximum part time work hours are 20 hours per week except during summer and winter vacations when there is no limit on the work hours. Working helps foreign students develop their language skills and explore career options.

International talent is welcome

The Taiwan Government wants



The starting salary for Taiwanese engineering graduates is around Rs 1 lakh per month

– Peters Chen



more international talents to stay and work in Taiwan, and therefore allows foreign graduates to stay in Taiwan on a job-seeking visa for 6 months, which can be extended up to a year, giving them enough time to find a suitable job for themselves. With new comment system, to obtain a work visa, foreign graduates must obtain the qualified scores, above 70 points, which depends upon various factors such as the type of degree pursued, average salary, work experience, knowledge of Mandarin language etc. Foreign

graduates can prepare for the points according to each criteria. As Indian students speak English, Hindi and other languages, graduates can get the full points easily in this category. However, learning Mandarin before and during the stay in Taiwan ensures a better score to apply for the permit. Education director of Taipei Economic and Cultural Centre in India, Peters Chen said, "According to a survey conducted in 2018, the starting salary for Taiwanese engineering graduates is around Rs 1 lakh per month. For assistant professor's position, it is over Rs 1.5 lakh per month, which is quite an attractive salary package when compared to the living costs in Taiwan." Aspirants can also opt for Taiwan Scholarship and Huayu Enrichment Scholarship. For details visit: https://www.roc-taiwan.org/in_en/cat/9.html

औरतों को शिक्षा की शक्ति देने की जो मुहिम सावित्रीबाई फुले ने शुरू की थी, वह बीच रास्ते में है अभी तो बहुत लंबी चलेगी पढ़ाई की लड़ाई



अनीता मिश्रा

मिसाल बन चुका है। अगर पड़ताल की जाए कि सावित्रीबाई सहित तमाम लोगों के संघर्ष का हासिल क्या है, तो निराशा ही हाथ लगेगी। किसी भी देश, जाति या वर्ग में सबसे बड़ा बदलाव शिक्षा से ही आता है लेकिन भारत में आधी आबादी की जिंदगी में बदलाव की गति बहुत धीमी है। इसकी मुख्य वजह तमाम लड़कियों का शिक्षा से वंचित रह जाना है। जाहिर है जब लड़कियां शिक्षा से वंचित होंगी तो तमाम संस्थानों में उनका प्रतिनिधित्व भी कम रह जाएगा।

■ वजहें तो कई हैं

इसी धीमी प्रगति का नतीजा है कि 'बेटी वचाओ, बेटी पढ़ाओ' महज नारा बनकर रह गया है। इसका जर्मनी हकीकत से कोई ताल्लुक नहीं है। एक और चिंताजनक बात यह है कि कोविड महामारी और उससे उपजे हालात ने लड़कियों को शिक्षा पर बहुत असर डाला है। महामारी के बाद जो हालात बने हैं उनमें बहुत लड़कियों को अपनी पढ़ाई छोड़नी पड़ गई। 'राइट टु एजुकेशन' फोरम ने अंतरराष्ट्रीय शिक्षा दिवस पर कुछ चौंकाने वाले आंकड़े जारी किए हैं। भारत में 15 से 18 साल की लगभग 40 प्रतिशत लड़कियां स्कूल से बाहर हो जाती हैं। कोविड के बाद ऑनलाइन क्लास शुरू होना,

लोगों को नौकरियां जाना- इन सबका असर सामाजिक ताने-बाने की वजह से लड़कियों पर ज्यादा पड़ने का अनुमान है।

अगर घर में कई बच्चे हैं तो माता-पिता चाहेंगे कि लड़के को पढ़ाई जारी रहे। निम्न आय वर्ग में समस्या है कि सबके पास फोन या लैपटॉप नहीं है। इसलिए डिजिटल क्लास अटेंड करना इन परिवारों के बच्चों के लिए बहुत मुश्किल साबित हुआ है। तमाम लड़कियों को पढ़ाई छूट जाने की वजह यह भी बन रही है। कुछ के घर में एक ही फोन है तो उससे भाई पढ़ रहा है। लड़का घर से निकलकर कहीं और भी जाकर क्लास कर लेता है। लड़को के लिए ऐसा करना मुश्किल हो रहा है। गांव-कस्बों में बहुत सारी लड़कियों को पढ़ाई इसलिए भी छूट जाती है कि स्कूल तक जाने के लिए उन्हें सुरक्षित माहौल नहीं मिल पाता है। उनके आने-जाने के रास्ते में ही उन्हें इतना तंग किया जाता है कि कभी घबरा कर खुद स्कूल जाना बंद कर देती हैं तो

जब तक महिला शिक्षित होकर वहां न पहुंचे, जहां से वह अपने साथ की अन्य महिलाओं की जिंदगी में भी बदलाव ला सके, तब तक सारी बातें बेमानी हैं

कभी घर वाले पढ़ाई छुड़वा देते हैं। 15 से 18 साल की लड़कियों के पढ़ाई से बाहर होने की तमाम वजहों में एक यह भी है। इसलिए बेटियों को पढ़ाने के लिए पहले हमें उनको सुरक्षित वातावरण देना पड़ेगा। अभी महिला दिवस के चंद्र रोज पहले अखबार में एक खबर पढ़ी कि कानपुर में एक लड़की ने



P Sreedharan

कोयंबटूर की अयिनाराशीलिम यूनिवर्सिटी के दीक्षांत समारोह में बैठी लड़कियां

अपनी वैक की नौकरी छोड़कर खुद को घर में बंद कर लिया। उसके ऐसा करने की वजह एक लड़का है जो उसे रास्ते में कभी अश्लीलता करके, कभी धमकियां देकर इतना तंग करता था कि वह डिप्रेशन में आ गई और ऐसा कदम उठा लिया। ऐसी खबरे वाकई शर्मनाक तो हैं ही, चिंताजनक भी हैं। जबकि कामकाजी लड़कियों का प्रतिशत विश्व बैंक की रिपोर्ट के मुताबिक भारत में 27 है।

विधायिका, कार्यपालिका, न्यायपालिका- सब जगह स्त्रियों का प्रतिनिधित्व बहुत कम है। जहां स्त्री के हक में कानून बनाया जा सकता है वहां यानी संसद में भी वर्तमान में यह आंकड़ा महज 13 प्रतिशत है। पिछले लोकसभा चुनाव में खड़े हुए 8000 से ज्यादा प्रत्याशियों में स्त्रियों

की संख्या 700 से कुछ ऊपर थी। इनमें से 78 स्त्रियां चुनी गईं। सारे राजनीतिक दल महिलाओं के आरक्षण को बात करते हैं लेकिन संसद में स्त्रियों के प्रतिनिधित्व से साफ हो जाता है कि वे इस मामले में कितने गंभीर हैं। इसी तरह जब भी स्त्री से जुड़े किसी मुद्दे पर फैसला आता है तो यह बात अक्सर उठती है कि महिला न्यायाधीश ज्यादा होनी चाहिए। वे शायद ज्यादा संवेदनशीलता से स्त्रियों से जुड़े मामलों को समझ सकती हैं। लेकिन न्यायपालिका में महिलाओं का प्रतिनिधित्व केवल 7.2 प्रतिशत है।

इतने कम प्रतिशत को देखकर ही अटार्नी जनरल के के वेणुगोपाल ने कुछ अर्सा पहले कहा था कि 'न्यायपालिका में स्त्रियों की संख्या बढ़ने से एक संतुलन बनेगा और यौनिक हिंसा

के केस समानुभूति को भावना के साथ हैंडल किए जाएंगे।' विधायिका और कार्यपालिका के बाद उस अंग की बात करें जहां नमान नीतियों पर एक्शन लिया जाता है देश को ब्यूरोक्रसी में स्त्रियों का प्रतिनिधित्व कुछ खास नहीं है। 2019 के एक डेटा के अनुसार केंद्र में संचिव स्तर पर 88 सेक्रेटरी रैंक में सिर्फ 11 महिलाएं हैं। संयुक्त सचिव स्तर पर यह आंकड़ा 19.14 प्रतिशत है। सरकार के सारे अंगों में महिलाओं के कम प्रतिनिधित्व के पीछे सामाजिक संरचना के साथ-साथ स्त्रियों में शिक्षा का प्रसार न होना भी है।

■ चौड़ी होती खाई

जब तक स्त्री शिक्षित होकर वहां तक पहुंचे ही नहीं सकेगी जहां से वह अपने साथ ही अन्य स्त्रियों की जिंदगी में भी बदलाव ला सके, तब तक सारी बातें बेमानी हैं। राष्ट्रीय स्नातकोत्तर संस्थान के एक सर्वे के अनुसार स्त्री और पुरुष साक्षरता में 14 प्रतिशत से ज्यादा का अंतर है। कोविड काल के बाद यह अंतर बढ़ जाने का आशंका जताई जा रही है। यह बात काफी फिक्र करने की है लेकिन सवाल यह है कि इस प्रतिशत को कैसे ठोक किया जाए, यह फिजिऑलॉजी किसे? देश के जोड़ों का 4.6 प्रतिशत ही शिक्षा के लिए रखा गया है जबकि हालात देखते हुए इसे बढ़ाया जाना चाहिए। लड़कियों को शिक्षा के लिए बजट में अलग से भी कुछ व्यवस्था होनी चाहिए। कम से कम इतना तो हर हाल में सुनिश्चित किया जाना चाहिए कि फिसे की वजह से या असुरक्षा के चलते बीच में किसी को पढ़ाई न छोड़नी पड़े। जब यह कहा जाता है कि एक स्त्री को शिक्षित करने का अर्थ है पूरी पीढ़ी को शिक्षित करना, तो इतने महत्वपूर्ण मामले को लेकर कोई गंभीर क्यों नहीं है?

[RESERVATION IN PVT SECTOR JOBS]

Is the Haryana Act legal?

Utkarsh Anand

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NEW DELHI: Haryana government's new law to reserve 75% of private sector jobs in the state, paying ₹50,000 or less a month, for local candidates, has triggered a controversy. But is the Haryana State Employment of Local Candidates Act, 2021 legal?

What are the provisions in the Constitution that enable reservation/quotas?

Article 14 guarantees equality and equal protection of law to all. Articles 15 (1) and 15 (2) prohibit the State from discriminating any citizen on ground of religion, race, caste, sex, or place of birth. But clauses (3) to (5) of Article 15 empower the State to positively discriminate in favour of the grossly underrepresented and neglected sections of the society in order to promote substantive equality. Article 15(3) empowers the State to make special provisions for women and children while Article 15(4) authorises the State to make special provisions for advancement of socially and educationally backward sections or SC/STs. Article 15(5) goes one step further and says the State can make reservation in admission to education institutions, whether or not aided by government.

Similarly, Articles 16 (1) and 16(2) lay down that the State cannot discriminate against citizens in the matters of employment.

However, clause 3 of Article 16 allows Parliament to enact a law with residence qualifications necessary for government jobs, thus introducing the domicile-based preferential treatment. Article 16(4) also allows the State to make reservation for any backward class of citizens, which in the opinion of the state is not adequately represented in services. This opens door for reservations for Other Backward Classes (OBCs). Article 16(4A) was incorporated permitting reservation in promotions but restricting the

PRIVATE FIRMS WILL LIKELY CLAIM THAT THE LAW INTERFERES WITH THEIR CONSTITUTIONAL RIGHTS TO CARRY ON TRADE FREELY

same to Scheduled Caste (SC) and Scheduled Tribes (ST).

After the Constitution (103rd Amendment) Act, 2019, clauses 6 and Articles 15 and 16 were inserted to provide for a further 10% reservation in jobs and educational institutions to economically backward sections in the general category.

Can courts direct the State to provide reservation to SC/ST or backward classes?

No. It has been held in a body of judgments of the Supreme Court that directions cannot be issued to the State to give reservation to any class of citizens.

Starting 1963, several rulings have emphasised that Articles 15(4) and 16(4) are enabling provisions and do not confer any right on SC/STs, OBCs or any other group of citizens to demand reservation as a matter of right, and thus, no such directive can be issued to the State by the courts.

In *MR Balaji Vs State of Mysore*, 1963, for instance a five-judge bench underscored: "It is necessary to emphasise that Article 15(4) like Article 16(4) is an enabling provision..." This judgement also held that case cannot be the sole and dominant test for determining social backwardness and that reservations made under Article 15(4) should be reasonable and less than 50%. These judgements drive home the point that although the State has been given the authority to provide for reservation, such decisions are amenable to judicial review.

Can a law be framed for res-

ervation on domicile?

Yes, but only by the Parliament. Article 16(3) in the Constitution empowers Parliament to provide for domicile-based reservation in public employment and jobs with local or any other authority under a state or a Union Territory.

Exercising this power, in 1957, the Centre passed The Public Employment (Requirement as To Residence) Act to repeal all existing laws in a state or a Union Territory that prescribed requirements as to residence (domicile) for public employment. The Centre, however, reserved its right to lay down rules in respect of certain classes of public employment in certain areas of some states such as Manipur, Tripura, Andhra Pradesh and Himachal Pradesh. But this power with the Central government is also not unfettered, as was made clear by a judgment of the Supreme Court in *AVS Narasimha Rao Vs State of AP* declared that the law enacted by Parliament under Article 16(3), making a special provision for domicile within the Telangana region of the State of Andhra Pradesh for the purpose of public employment, was ultra vires (without power under) the Constitution. It ruled that even Parliament cannot use the power under Article 16(3) to provide for domicile-based reservation in a particular part of the state and that the entire state must be the venue for residential qualification.

Do state governments have any specific power to make laws/policies for domicile-based reservation?

No. When the reservations of certain percentage of seats in medical colleges in favour of candidates from rural areas was sought to be justified on economic considerations, a three-judge bench of the Supreme Court, in *State of Uttar Pradesh Vs Pradip Tandon* (1974) emphatically rejected the plea. In *Dr Prad-*

deep Jain Vs Union of India, 1984, the top court dealt specifically with the issue of domicile-based reservation, noting that to regard an individual from one state as an outsider in another state "would be to deny him his constitutional rights and to derecognise the essential unity and integrity of the country by treating it as if it were a mere conglomeration of independent States."

Can a state make it legally contingent for a private sector firm to reserve jobs for local residents?

The Act mandates all private establishments in Haryana to provide 75% of new jobs to local candidates. Under Article 19(1)(g), all citizens have a fundamental right to practice any profession, or to carry on any occupation, trade or business as a fundamental right. By mandating private institutions to employ a certain set of candidates, the Act constricts their right to carry on their occupation freely, which will be a major basis of challenges to the law.

The 93rd Constitutional Amendment Act was passed in 2005 to allow the State to make provisions for the advancement of socially and educationally backward class of citizens or SC/ST in matters relating to admission in private educational institutions. But this does not give power to the State to make such provisions for employment in private institutions. Private firms will likely claim that the law effectively interferes with their constitutional rights to carry on their trade freely, especially when they do not receive any sops from the government and the law also falls on constitutional touchstone.



READ: Scan the QR code to read the full explainer

STUDY ABROAD

Test score waiver has led to a deluge of applications in top US colleges while lesser known ones face empty mailboxes, says **Amelia Nierenberg**



ISTOCK

Prestigious universities like Cornell never have a hard time attracting students. But this year, the admissions office in Ithaca, New York (pic above), is swimming in 17,000 more applications than it has ever received, driven mostly by the school's decision not to require standardised test scores during the coronavirus pandemic.

But while selective universities such as Cornell and its fellow Ivy League schools have seen unprecedented interest after waiving test scores, smaller and less recognisable schools are dealing with the opposite issue: empty mailboxes.

In early December, applications to Cal Poly Pomona, east of Los Angeles and part of the California State University system, were down 40 per cent over the previous year from would-be freshmen, and 52 per cent from transfer students, most of whom started their higher education at community colleges.

A drop in applications does not always translate into lower enrolment. But at a time when many colleges and universities are being squeezed financially by the pandemic and a loss of public funding, the prospect of landing fewer students — and losing critical tuition dollars — is a dire one at schools that have already slashed programmes and laid off staff.

To avoid that, the faculty and administrators at Cal Poly Pomona, which lost \$20 million in state funding this fiscal year, spent December calling students who had started their applications but not submitted them or who had applied in the past and were not accepted.

The California State system extended the application deadline for all its schools by two weeks, and Cal Poly Pomona managed to close the gap. But its herculean effort, at a time when Ivy League schools had to

add an extra week just to consider their influx of applicants, further underscored inequities in higher education that have been widened by the pandemic.

"It's impacting both students from an equity perspective," said Jenny Rickard, CEO of The Common Application, which is used by colleges across the US, "and then it's also showing which colleges and universities are more privileged."

The nation's most selective four-year institutions, both public and private, saw a record-breaking 17 per cent increase in applications this year. Small liberal arts schools felt a boon, with applications to Haverford and Swarthmore increasing by 16 per cent and 12 per cent, respectively.

So did large state schools like the University of California, Los Angeles (UCLA), where freshman applications increased 28 per cent. Harvard saw a whopping 42 per cent spike, while Colgate University in upstate New York received 103 per cent more applications.

But smaller or less recognisable institutions, both public and private, saw precipitous declines.

Applications fell by 14 per cent at the State University of New York, the

largest public college system in the country. At Portland State in Oregon, freshman applications were down 12 per cent and transfers down 28 per cent. Loyola University Maryland, a private liberal arts school in Baltimore, has seen a 12 per cent drop in total applications, even after extending its deadline by two weeks.

The declines come at a time when colleges and universities have been battered financially by the coronavirus, with estimated losses of more than \$120 billion (Rs 8,80,408.2 crore) from plunging enrolment and dried-up revenue streams like food services and athletic events.

Common App data does not include community colleges because they typically allow anyone to enrol. But those schools, which often provide low-income students a first step into higher education, also saw steep declines. In the fall of 2020, freshman enrolment fell by more than 20 per cent.

"We saw the largest declines by far among students from low-income high schools, high-minority high schools, urban high schools, who ordinarily would have gone to community colleges this fall, and who just vanished," said Doug Shapiro, vice-president for research at the National Student Clearinghouse Research Center, which publishes educational reports.

Those students often have to work or lack online access, making it

harder to apply, he said. "Those are students that are going to have the most difficulty getting back on track, even once the pandemic is over."

However, some selective schools saw big increases from students who are typically underrepresented at elite institutions. The University of California, Berkeley, received 38 per cent more applications from black, Latino and native American hopefuls than in 2019. New York University saw 22 per cent more applications from both black and Latino students.

There is little doubt what is driving those gains: making standardised test scores optional for applicants. About 1,700 schools did not require SAT or ACT scores this year.

Although most schools that waived standardised tests this year did so temporarily, a growing number are making it permanent because of concerns that the tests are inherently biased. The University of California system, which serves nearly 3,00,000 students and includes some of the nation's most-desired schools, decided last year to suspend consideration of SAT and ACT scores. Applications across the system increased 16 per cent this year, a record high.

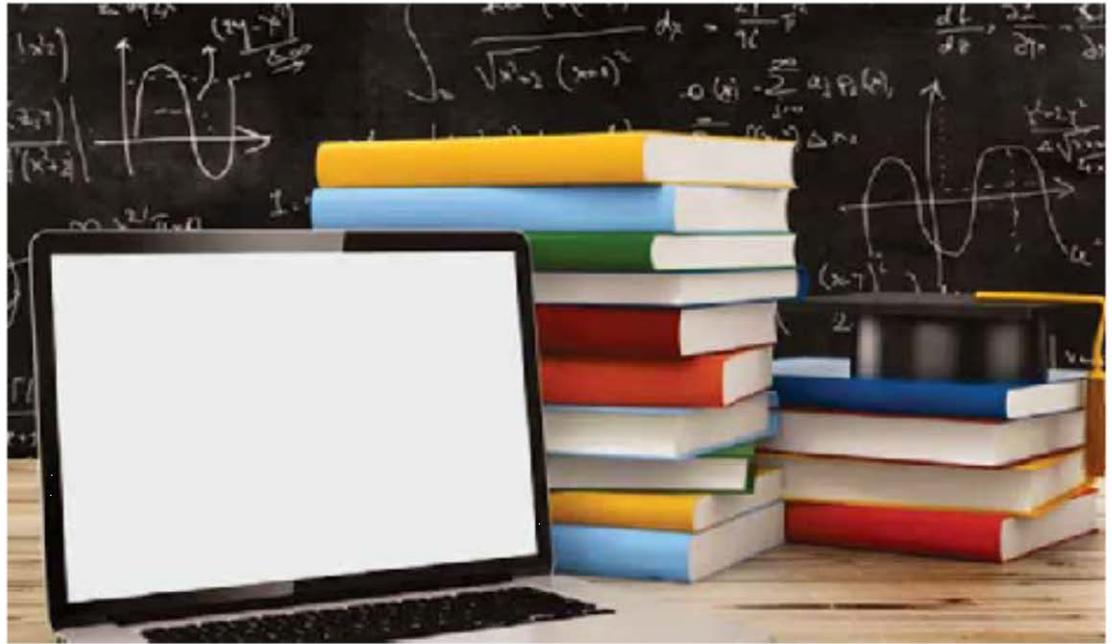
While Cornell and its peers enjoy their bounty, the state systems and less-selective private schools that educate the majority of US college graduates are bracing for long-term distress if the drop in applications leads to depressed enrolment and lower tuition revenue.

Colleges usually admit students they think will attend. But this year, with increased competition for them, admitted students might start playing the field or get stuck on waitlist limbo at more selective schools as a hectic year shuffles out.



Admitted students might start playing the field or get stuck on waitlist limbo at more selective schools

The biggest challenge due to the present pandemic has been to keep the faith of students and parents anchored in the system of education. But until the COVID-19 battle is won, teaching will need to be a merger between learning online and offline, says KADAMBARI RANA



Rethink how to teach

As the countries of the world prepare for COVID-19 vaccination drives to safeguard citizens from any further impact of the pandemic, the tenure of the COVID-19 and its widespread devastating impact will always be remembered as one of the most turbulent times in recent history of the modern world.

For time immemorial mankind has been thrown into external turbulent circumstances such as pandemic, wars, environmental changes, social and political changes, economic and technological changes and also inner turbulences in the form of fear, anxiety, jealousy, desperation, greed and lust.

However, it has also been witnessed that at each such turbulent juncture the success and survival of mankind was directly co-related to the advancement made towards self-development and the ability to adapt.

As for the education sector at large the biggest challenge in this pandemic has been to keep the faith of students and parents anchored in the system of education. Educators have worked determinedly to create a sense of continuity of learning for their students despite technological deter-

ments and poor accessibility to means of communication.

After rowing in the stormy waters of the virtual education world for almost a year, educational institutes are now preparing to open their campuses again. However, until the COVID-19 battle is wholly won, education for students will need to be a merger between learning at the school campus and at home-based study stations.

School leaders and teachers must awaken themselves to the basic needs of the students and must re-create their strategies and curriculum in such a way that despite the constraints of the pandemic and its after effects these needs are met.

According to theorist, Abraham Maslow the needs of the students are broadly identified as; physiological needs, safety needs, need for love and belonging, need for self-esteem and also a spiritual need for self-actualisation.

During the COVID-19 ensuring physical safety of the students will remain a focal point. The education atmosphere should be free of any kind of fear or desperation if we intend our students to maximize their potential.

School leaders and teachers must awaken themselves to the basic needs of the students and must re-create strategies and curriculum in such a way that despite constraints of the pandemic and its after effects these needs are met

School leaders must focus on making the schools physical infrastructure- COVID safe, by following all necessary Government norms and protocols. A department, within the school should be formed which works full time in preventing and handling of COVID related contingencies.

Schools should begin preparing blueprints to include changes such as; installations of thermal scanners at the entry and exit points, socially distanced indoor classroom settings, physically distanced desk arrangements, outdoor class-rooms, plans for disinfecting classroom and school furniture, systems for improved wash-room practices and so on.

Coming to educational content; schools will need to redesign not only the method of delivery of teaching but also content that needs to be delivered. Schools must consider shifting focus from advance knowledge to foundation concepts, as an interim solution during the pandemic. Time-tables, school working days and school working hours will also need to be reworked. Even if the schools reopen, it may still not be advisable to congest or overpopulate the school premises.

Ideally schools should follow

a staggered re-opening approach, which is expected to offer a comfortable transition period, from a complete house arrest to full time school, for students.

For the staggered re-opening, some of the approaches could be; students attending schools residential zone wise, opening the school class-wise or offering home schooling by teachers in small groups.

Whatever may be the context or times, the role of a school in a child's life is quite cut out; it is to bring forth the innate capacity and capability of each child and to go beyond the realms of technical knowledge and basic skills.

School education should not be limited to a few deliberate concepts and pre-planned strategies. In the words of western philosopher Lodge: "All experiences are said to be educative — the bite of mosquito, the taste of a water-melon, the experiences of falling in love, of flying in an aeroplane, of being caught in a storm in a small boat experiences have directly educative effect on us. Whatever broadens our horizon, deepens our insight, refines our reactions, and stimulate thought and feeling educates us.

The writer is an educationist

Need to future-proof skills of students, workers



M RAJIVLOCHAN

PROFESSOR, PANJAB UNIVERSITY

The National Skill Development Mission focuses only on very basic-level skills rather than higher-order skills. Skilling India is essentially about improving productivity at the workplace. We need to send out a direct message that the opportunity to improve and excel is always available. In order to improve the average skill set across the board, we need to pay more attention to energising our institutions of higher education.

CAN generalising learning push Indian economy towards a healthier growth path? We say that is the only way possible. Otherwise, we shall remain stuck in our morass.

As the Indian economy struggles to get back on its feet, it is imperative we notice that this is still the same old bricks-and-mortar economy which is coming back to life. This economy, even when it is fully revived, will have serious limitations on how much it can grow, will extract heavy environmental costs, and remain extremely vulnerable. Moreover, as critic after critic has pointed out, this growth has been confined to a handful of companies, a handful of people. So much so that ruing this growth has become big business for some. The point is not to rue the existence of the handful who have been successful in growing; the point is to create a congenial environment where everyone else can grow. How can one do this?

The only way forward possible is by generalising learning. Indians have a tendency to be caring and relatively non-aggressive as compared to the cultures of Europe and North America. Perhaps this trait can be used to create a supportive social environment where the success of one need not be at the cost of another. What India really needs to do is to create force multipliers so that the size of the pie can increase dramatically. Fighting over who should get what piece of it is irrelevant and a waste of energy. We argue that a generalisation of learning is such a force multiplier.

So what does a generalisation of



ARTIFICIAL INTELLIGENCE: Higher education institutions seem to see much more profit in creating small courses for very few students to teach them meta-skills. **srcc**

learning really mean? It means firstly, giving up an obsession with elite education. While the idea of a society led by the elites seems attractive initially, it actually is a failed idea, inappropriate for modern times. And yet, in its obsession with elites, the Indian state has consistently over-invested in institutions like the IITs and the IIMs at the expense of others. No one doubts the value of these institutions. But surely after more than seventy years of continuous financial support, they should have had enough material achievements to be able to stand on their own feet even while providing support to students from an economically weak background? High-achieving students, who excel in scholastics and also in the material world exist in all societies. However, societies show healthy and equitable eco-

nomie growth only when average skill levels increase.

Come to think of it, even today in India, there are some who did their schooling and college in villages and small towns and who have created much wealth for the nation, without any stamp of elite written on them. Their achievements, unfortunately, are entirely of their own making, without any help from either the state or the society and their numbers are too small to make a difference to society. For example, the wealth of Byju Raveendran, the owner of Byju's Classes, an educational technology venture, increased by more than 100 per cent during the pandemic from \$1 billion to more than \$2.5 billion. Raveendran studied in a Malayalam-medium school and graduated from Government Engineering College, Kannur. He refused to

join an IIM. He is only one of the many better-known wealth creators who never attended any elite institution.

If only India were to work towards a generalisation of learning and upgrade education in general, that would be the real key to a \$5-trillion economy. The skill landscape of the world is changing rather fast. Several surveys say that nearly half the people in the job market today will become unemployable if they do not upgrade their abilities. It is by upgrading the generality of education, by investing heavily in newer skills like artificial intelligence and data analytics that we can vastly upgrade the skills of Indians in the sunrise sectors of the future.

To achieve this kind of upgrade requires very substantial investments, often beyond the reach of the average student. The course fee is only one of the obstacles in the way of poor students. The far greater obstacle is that at the moment, higher education institutions seem to see much more profit in creating small courses for very few students in sectors like artificial intelligence (AI) and data analytics rather than teaching such meta-skills to all their students. An engineering course with a specialisation in AI, which is what many engineering colleges are doing, can create an elite cadre. Such a plan cannot re-skill all the students even though these skills will be needed by all of them irrespective of the job that they join.

Actually, given that AI is merely a tool to look at data, it makes far more sense to offer such a course to students of the basic sciences, social sciences, medicine and engineering rather than

to create a stand-alone course.

And AI is only one of the emerging tools. Skills in analytical thinking, statistics, cyber security, clinical data management to name only a few, would be critical to any knowledge economy.

Yet the National Skill Development Mission focuses only on very basic-level skills rather than such higher-order skills. Skilling India is far more than merely teaching students how to be better menials, fitters, car painters, nurses, doctors, engineers, journalists, teachers or whatever. Skilling India is essentially about improving productivity at the workplace. Learning is a continuous process, it does not end with studenthood. What we need to do is to send out a direct message that the opportunity to improve and excel is always available and we need to make those opportunities available. For inculcating higher-order skills and to improve the average skill set across the board, we need to pay more attention to energising our institutions of higher education.

There are reports that point out the need to future-proof the skills of Indian students and workers. NSSO data says that only 2 per cent of the Indian workforce has any formal training. For those students who do possess formal training, employability remains low. As of today, the Aspiring Minds Employability Survey for Engineers for 2019 says that only 3 per cent engineers possess new-age skills in areas such as AI, machine learning, data engineering and mobile technologies. Among science and social science students, the figure is close to zero per cent.

शिक्षा का बजट

दिल्ली सरकार के वित्त मंत्री मनीष सिसोदिया ने मंगलवार को विधानसभा में वित्त वर्ष 2021-22 के लिए उनहत्तर हजार करोड़ रुपए का जो सालाना बजट पेश किया, उसकी बड़ी खूबी यह है कि इसमें शिक्षा और स्वास्थ्य क्षेत्र को सबसे ज्यादा तवज्जो दी गई है। शिक्षा और स्वास्थ्य की मद में सबसे ज्यादा पैसा आबंटित कर सरकार ने अपनी इस वचनबद्धता को निभाने की कोशिश की है कि आमजन की बुनियादी जरूरतों को पूरा करने में वह कोई कसर नहीं छोड़ेगी। दिल्ली सरकार ने अब तक के अपने मौजूदा और पिछले कार्यकाल में इन दोनों क्षेत्रों में ठोस काम करके इसे साबित भी कर दिखाया है। शिक्षा, स्वास्थ्य, बिजली, पानी जैसे मुद्दों पर बड़ी पहल और उपलब्धियों की बदौलत ही केजरीवाल सरकार को दिल्ली की जनता ने फिर से सत्ता सौंपी। ऐसे में सरकार का यह उत्तरदायित्व और बढ़ जाता है कि वह जनता की उम्मीदों पर खरी उतरे। हालांकि आबादी, क्षेत्रफल, अधिकार, पूर्ण राज्य के दर्जे की स्थिति और अलग प्रशासनिक ढांचे जैसे कारणों से दिल्ली सरकार के बजट की तुलना दूसरे राज्यों सरकारों के बजट से तो नहीं की जा सकती, लेकिन शिक्षा और स्वास्थ्य जैसे क्षेत्रों में कैसे काम किया जाए, दूसरे राज्य दिल्ली से यह सीख जरूर ले सकते हैं।

दिल्ली सरकार ने शिक्षा की मद में सोलह हजार तीन सौ सतहत्तर करोड़ रुपए रखे हैं। यह रकम कुल बजट राशि की लगभग एक चौथाई बैठती है। आज पूरी दुनिया में जिस तरह से शिक्षा का परिदृश्य बदल रहा है, उसे देखते हुए दिल्ली में भी शिक्षा के ढांचे को मजबूत और आधुनिक बनाना जरूरी है। फिर दिल्ली देश की राजधानी है और देश-विदेश से यहां विद्यार्थी पढ़ने के लिए आते हैं। ऐसे में शिक्षा क्षेत्र को बदलते वक्त और वैश्विक जरूरतों के अनुरूप बनाए बिना वैश्विक प्रतिस्पर्धा में नहीं उतरा जा सकता। इसमें कोई संदेह नहीं कि पिछले सात साल में दिल्ली सरकार ने स्कूली शिक्षा के क्षेत्र में जिस तरह का काम किया, उसकी देश-विदेश में प्रशंसा हुई और कुछ राज्यों ने यहां के मॉडल को अपने यहां अपनाया भी है। बजट में दिल्ली सरकार ने बेहतर शिक्षक तैयार करने के लिए एक विश्वविद्यालय और एक विधि विश्वविद्यालय खोलने की भी योजना है। सरकार इस बात को समझ रही है कि जब तक हर बच्चे को गुणवत्तापरक शिक्षा नहीं मिलेगी, तब तक अच्छे नागरिक का निर्माण संभव नहीं है।

बजट में शिक्षा के बाद सबसे ज्यादा पैसा नौ हजार नौ सौ चौतीस करोड़ रुपए स्वास्थ्य क्षेत्र के लिए आबंटित किया गया है। दिल्ली में आबादी का दबाव जिस तरह से बढ़ता जा रहा है, उसके अनुपात में स्वास्थ्य सुविधाएं आज भी पर्याप्त नहीं हैं। ऐसे में स्वास्थ्य क्षेत्र पर खर्च बढ़ाना अपरिहार्य है। पिछले एक साल में कोरोना महामारी से निपटने के लिए हालांकि सरकार ने प्रयासों में कोई कमी नहीं रखी, लेकिन इस दौर का अनुभव बताता है कि स्वास्थ्य क्षेत्र अगर दुरुस्त होता तो हमें मुश्किलों का सामना कम करना पड़ता। सरकारी अस्पतालों में मुफ्त कोरोना टीके लिए बजट में पचास करोड़ रुपए का प्रावधान है। दिल्ली में परिवहन, प्रदूषण जैसे मुद्दे भी महत्वपूर्ण हैं जो सीधे तौर पर आम आदमी से जुड़े हैं। पर्यावरण को साफ बनाने के लिए बिजली से चलने वाले वाहनों को बढ़ावा देने की नीति पर तेजी से काम होगा। झुग्गी बस्तियों में रह रहे लोगों के लिए फ्लैट बनाने के लिए पांच हजार करोड़ रुपए से ज्यादा रखे हैं। सरकार वर्ष 2047 तक दिल्ली की प्रति व्यक्ति आय सिंगापुर की प्रति व्यक्ति आय के बराबर ले जाने की इच्छा रखती है। शिक्षा से सरोकार रखने वाली सरकार और समाज के लिए ऐसा लक्ष्य कोई असंभव नहीं है।

Leave institutions, PhD theses alone

The recent controversy over a PhD dissertation by a scholar at the Indian Institute of Management (IIM), Ahmedabad, again highlights issues relating to the autonomy of institutions of higher learning and the academic freedom afforded to students and faculty. There is a law that gives autonomy to the business schools but attempts at interference and control keep coming up. The latest that has come into the public realm is a move by the government to persuade the director of IIM-A to review the contents of a PhD dissertation on electoral democracy. The director, Errol D'Souza, resisted the pressure and stood his ground, though it is not known if the last word has yet been said in the matter.

BJP leader Subramanian Swamy wrote to the education ministry last year that a thesis submitted to IIM and



**IIM-A director
stood up for
autonomy, aca-
demic freedom**

approved by it contained references to the BJP and the BSP as "ethnically-constituted parties" and another mention of the BJP as "a pro-Hindu upper caste party." He wanted the dissertation to be re-examined by "independent professors." The ministry demanded from the IIM a copy of the dissertation, but the director refused to send it because the ministry has no right to sit in judgement over a PhD thesis. He also said that any matter relating to the content of the thesis should be raised with IIM's Thesis Advisory and Examination

Committee. But the ministry has sent him a reminder on the matter. It is unfortunate that the ministry did not pay heed to basic academic norms and practices. A PhD thesis does not represent the views of the institution that awards the degree. It only shows that the scholar has studied a topic and formed some well-argued and tenable conclusions about it. Examiners approve dissertations even when they disagree with their content.

The important point is that no person or agency outside the academic institution should have a say on the merits of a dissertation or the award of a PhD. That is why the IIM director's stand is right and worthy of praise. Recently, the Ministry of Education had made a move to give itself powers to dismiss the board of governors of an IIM if it is found acting in contravention of the IIM Act. This was after disagreement over the IIM's decision to start a one-year management course. But the law ministry vetoed it. The government also withdrew another directive requiring prior permission for virtual seminars, which would have affected all institutions, not just the IIMs. The IIM Act grants the business schools a fair amount of autonomy. But incidents and attempts keep coming up that endanger that autonomy. Other institutions are even more vulnerable in this respect.

BLENDED LEARNING IS THE FUTURE OF GLOBAL LEARNING

Amid the Covid-19 pandemic, the education system has gone through an unprecedented growth in digital transformation, but experts believe that this is just the beginning.



R.L. RAINA

The year 2020 was one of the biggest years of transformations the education industry is witnessing currently. The coronavirus pandemic rapidly forced our classroom learning process to completely adhere to digital mediums and at times blended education (partially online and classroom) in order to have an uninterrupted learning.

The Covid-19 pandemic impacted the education sector massively, with 1.26 billion children worldwide having gone education-less, as estimated by the UNESCO, out of which 300 million children are just from India. The initial hiccups of the lockdown had compelled not only students but also educators to come out of their comfort zone and learn new skills to master online teaching platforms, among others. The complete education system has gone through an unprecedented growth in digital transformation; moreover, the education experts suggest that this is just the beginning.

As we move towards a new beginning, we should be ready with novel challenges including student retention,



student engagement, collaborative learning requirements as well as competitive models from international institutions. Edtech is going to play a pivotal role in solving these challenges for higher education institutes. The following are the key trends:

VIDEO-BASED CONTENT TO RISE

One should not be surprised to learn that the usage of videos for online training (or video-based learning) will get a new momentum this year to make the education process interesting and increase student engage-

ment. No doubt, videos are a high-impact medium, and it creates an engaging learning experience with high recall and retention. It also encourages micro-learning, creativity and interactivity among the students.

There is a myth that video-based learning was

created to replace teachers and trainers, but actually it was created to enhance the learning experience and increase the accessibility of quality education even in the far-flung areas, where there is a dismal student and teacher ratio.

INCREASED USAGE OF ADVANCED DIGITAL TECHNOLOGY

IoT (Internet of Things), Artificial Intelligence, Machine Learning, Virtual Reality and Augmented Reality are going to play a pivotal role in education in order to enhance student learning and engagement. It will reinvent the online learning space in the years to come. Through AI, student learning abilities will be estimated, which in turn will help us bring

modifications in the learning process.

But the biggest challenge in implementing these evolved technologies in education is the Internet penetration, especially in tier-II and tier-III cities. These technologies have to be affordable so that underprivileged students can also have access to them.

A CASE FOR BLENDED LEARNING

With the onset of a new strain of muted coronavirus, it seems the first few months of 2021 would follow the 'new normal'. In such a scenario, blended learning will play a significant role for the education sector. For the past few years, blended learning has been a part of premier

higher education institutes such as IIMs, IITs, etc. This form of learning combines online educational materials and opportunities for online interaction with traditional place-based classroom methods. Since some courses involve practical classes, blended learning is effective for such studies.

Blended learning helps in enhancing the access to education and maximises flexibility to both students and teachers. This kind of learning process initiates student interest, interaction and satisfaction in the learning environment. Blended learning is no doubt the future of global learning.

The writer is Vice-Chancellor, JK Lakshmiipat University, Jaipur.

Redesigning India's reservation system

In a political sense, India's system of caste reservation is in robust health. Caste quotas have strong popular support — one 2018 survey in Uttar Pradesh found that 69% of adults approved of them, including a majority of forward castes. The new 10% quota for the economically weaker sections of the forward castes appears similarly popular, as do sub-quotas for the Extremely Backward Castes. The enthusiasm for reservation extends to relatively prosperous peasant groups — Jats, Patels and Marathas, among others — whose demands for quotas have led to confrontations either with groups with existing quotas or challenging the Supreme Court's 50% limit on reservation.

Meanwhile, the social scientific evidence for the positive effects of reservation is strong and getting stronger. Caste discrimination remains common in rural India, and even after nearly a century of quotas, caste is highly predictive of socioeconomic outcomes even after accounting for other factors such as parental occupation and education.

Moreover, the imposition of quotas leads to broadly distributed welfare gains for the targeted groups. In a recent article, I found that the implementation of the Mandal Commission report in the 1990s increased the educational attainment of the average Other Backward Classes (OBC) adults by a year and their probability of holding a government job by six

percentage points, with the largest gains coming among those with modestly educated fathers. Similarly, concerns that reservations lead to a decline in institutional efficiency appear overblown. For instance, in a recent article, I found that lower caste Indian Administrative Service (IAS) officers perform better than others in implementing anti-poverty programmes.

However, there is no denying that there is widespread cynicism about the reservation system among working politicians and within the Indian middle-class. They see reservation as a political "goodie" rather than an idealistic effort to create a more just society. The concerns can be grouped under two main headings.

That the reservation system is "divisive" and that it is "unfair." While both terms can be used as coded ways of dismissing all low-caste activism, both have some basis in fact. Reservation has probably encouraged that tendency of Indian political debate to focus on the entitlements of groups rather than individuals, and on the distribution of existing opportunities rather than the creation of more opportunities.

Moreover, the nearly exclusive focus on a single ascriptive trait, caste, necessarily creates situations where the system does not promote the broad principles of fairness. There

are many individuals from non-listed groups (some of whom are members of religious minorities) who have access to only limited social and educational opportunities, while there are many others who are able to produce caste and non-creamy layer certificates despite having access to very extensive social and educational opportunities. A few such "anomalies" are inevitable in any system of social entitlements, but when they proliferate, they threaten the legitimacy of the system in a fundamental way.

In the mid-1990s, the system of racial preferences in the United States went through a similar crisis of legitimacy, with many arguing that it should fade away after 25 years. President Bill Clinton, in a nationally televised speech, famously suggested that the system should be reformed rather than abolished — "mend it, don't end it".

Many dismissed this as a typical piece of obfuscatory political rhetoric, but it captured a fundamental truth — that positive discrimination can lead to important advances in societies with deep-seated social inequalities, but that such systems must be periodically examined and redesigned.

As the various challenges to the 50% ceiling and specific caste listings make their way through the courts, India has a chance to rebuild the link between reservation and social justice. The most obvious reform would be to reduce the number of relatively wealthy beneficiaries. This could be done both by enhancing enforcement of the existing creamy layer system (widely thought to be defective) and by refusing to grant reservations to rela-

tively prosperous castes on purely political grounds.

A more ambitious reform would be to abolish the artificial distinction between "merit" and "quota", and access each application holistically.

The current system is indifferent to the level of social disadvantage of those who are not members of a quota category and assumes that the disadvantages of those within each category are the same. At the same time, the system is also indifferent to the qualifications of quota candidates (except relative to each other), as long as they clear a low minimum.

Alternatively, one could define a "disadvantage factor" for every candidate, incorporating both family background and income and the social challenges faced by their community. This disadvantage factor would then be added to the "merit factor", derived from exams to give an overall score.

Such a system would allow for fine-grained adjustments based on the latest social scientific evidence about the socioeconomic status of particular communities and the relative role of group or individual factors. It would also change conversations around reservation from binary demands at the group level ("we are disadvantaged") to questions of scaling at the individual level ("how disadvantaged is this person relative to other people?").

Such a system would enable the reservation system to return to its original purpose of making India a more just society. Whether politicians will give up a potent way to reward vote-banks, is, of course, another question.



Alexander Lee

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The views expressed are personal

'Understanding mathematical concepts important'

Face to Face

Prasanta J Baruah

Anupal Saikia, Assistant Professor in Mathematics at IIT, Guwahati is the first 'Wrangler' from Assam. He studied at Golaghat Govt Barabrah School and Cotton College before graduating from St Stephen's College, Delhi. He went to Trinity College, Cambridge on Ramanujan Scholarship and obtained his PhD on Number Theory. He has worked in Institut des Hautes Etudes Scientifiques, Paris, McGill University, Montreal and IIT, Bombay.



You have the rare distinction of being a 'Wrangler' in Mathematics from Cambridge University. What is the significance of this achievement?

A student who secures first class in the Mathematical Tripos at Cambridge University is called a 'Wrangler'. The Mathematical Tripos has been considered as one of the toughest examinations for centuries, and perhaps it led students of mathematics to covet the recognition of being a 'Wrangler'.

In what ways have you found the environment of mathematical study and research in Cambridge different from India?

In India, performing well in examination has become the primary goal largely due to a sense of insecurity among students and parents. Due to large population of India, there is a struggle for seats in premier institutes as well as jobs which makes student's marks-oriented. The education system is comparatively rigid, and options available to students are limited. In Cambridge, I

saw that most students study the subject they love out of their own free will and are very passionate about what they are learning. I saw few students studying only for exams there. My impression is that students are brought up in a way to feel more confident about the crown title said to express themselves freely there. As for mathematical research, there is a very rich tradition in Cambridge owing to great mathematicians such as Newton, Hardy, Ramanujan and many Field medalists of modern era.

In what ways are the approach of the common people towards Mathematics different in India and abroad?

I think there is a lot in common there. Most people tend to think of mathematics as a difficult subject, and presume that they will not be able to appreciate the beauty of mathematics.

India is said to have discovered the number zero. So we have a tradition of studying numbers. Are we still maintaining

this tradition and development?

India contributed significantly to the development of mathematics since ancient times. We all know about mathematicians such as Aryabhata, Brahmagupta, Bhaskara and Madhava to name a few. However, there was a kind of discontinuity for quite a few centuries in India when most significant contributions were being made by mathematicians in Europe, and in particular by the French and the Germans. Ramanujan inspired new generations of mathematicians in India in the twentieth century.

The coming of the British witnessed the introduction of English education. It also produced great mathematicians like Ramanujan. Was this transition disruptive or smooth?

I am unsure how much of Ramanujan's achievement can be attributed to English education system. He was a natural genius who made so many mathematical discoveries with out having exposure to come up in my books

and mathematical developments of the day. As such, he had not completed his college education in India before his famous letter to Hardy caused a stir in Cambridge and eventually brought him there. I would venture to say that common people had too little access to formal education beyond religious teachings when English education was introduced.

Unlike the rest of India, Assam and the Northeast do not have a rich tradition of trade and commerce. We started formal study of numbers only after the British took Assam in 1826. Do we have a lot to catch up?

As a student who studied in Assam till class 12, I never felt that I was at any disadvantage compared to students that I came across in Delhi from other states of India. The school students under the SERA have the advantage of learning Advanced Mathematics as an elective subject. However, for undergraduate study in mathematics, colleges in Assam or the North East have some catch up to do with the colleges affiliated to the premier universities of the country. If we want to look beyond India and consider the education system of some of the developed nations, a lot of reforms are needed, from primary school onward.

You come from Golaghat in Upper Assam. What are the factors which motivated you to make up the study of Math-

ematics?

I developed a liking for mathematics early in my life. I enjoyed solving odd mathematical puzzles that my father used to pose while I was in primary school. I got further stimulated when Jai Mohan Das gave me more puzzles to solve from various books during classes 8 to 10. The Mathematical Olympiads started by Assam Academy of Mathematics around those years motivated me too.

As a brilliant student you could have gone for engineering, medicine and other attractive disciplines? Why Mathematics?

I was very much attracted to mathematics. As a school student, I immensely enjoyed working out solutions of mathematical problems and struggling with those which I could not immediately solve. There was no doubt whatsoever in mind that I would only pursue mathematics in college. Engineering or medicine did not hold such charm for me.

What advice will you give a student interested in the study of Mathematics. What career roadmap should he follow to achieve his goal?

I would advise interested students to try and develop a thorough understanding of the mathematical concepts, layer by layer. Then they should attempt to solve as many problems as they can, with a little help as possible from books or teachers so that their own thought process develops.

Students should be aware of the opportunities, resources, and the programmes at premier institutes of the country as well as abroad. They must be just for gaining admission into undergraduate or postgraduate programme of such institute.

What advice will you give to parents to instil interest in Mathematics in their children?

I would say parents may encourage their kids to solve mathematical puzzles and problems, which should be neither too easy nor too much out of their reach. Exposure to books or even online videos about lives of great mathematicians, and their work may stimulate the young. Parents have to maintain a delicate balance as more expectations can have a detrimental effect.

Besides academic and research, what career options are there for a young mathematician?

Training in mathematics opens up career options in different sectors such as IT, Finance, Analytics etc.

How can we produce good mathematics teachers in our state?

We should have regular training programmes for teachers. There should be various forms of incentives for the teachers who teach the subject successfully. More resources such as books and online access should be available. There can be annual sessions on pedagogy and interaction with educationists as well as mathematicians.

(pbaruah_at@yahoo.com)

Mathematics for a better world

■ Dr Manjil P Saikia; Mushahidul Ahmed

Since 2020, the 14th of March has been designated as the International Day of Mathematics (IDM) by the Executive Council of UNESCO. This day aims to showcase the fundamental role played by the mathematical sciences in the achievement of the United Nations' Sustainable Development Goals (SDGs) and in reinforcing the two UNESCO priorities: Africa and Gender Equality, among other things.

The Day invites us to celebrate the joy to be found in mathematics as well as the platform of vocational offers to girls and boys through safe and diverse activities taking place around the world.

It is also known as Pi Day, which celebrates the mathematical constant Pi (π), an irrational number which is the ratio of a circle's circumference to its diameter. The ubiquitous nature of this fundamental mathematical constant had been celebrated for a long time as Pi Day, but with the juxtaposition of IDM the celebration has got more meaning.

14th March is also the birthday of the great theoretical physicist, Albert Einstein who developed the general theory of relativity, one of the two pillars of modern physics. He is best known for his mass-energy equivalence formula, $E=mc^2$. He received the 1921 Nobel Prize in Physics for his discovery of the law of the photoelectric effect. 14th March also marks the death anniversary of Stephen Hawking, known for his work with black holes and relativity, and the author of popular science books like 'A Brief History of Time'. So, the significance of the day is immense, not only in mathematics but

in science as a whole.

The theme for the 2021 IDM is 'Mathematics for a better World', which is at this time the more pertinent due to the ravages of the ongoing COVID-19 pandemic. We have seen how mathematical models of viral transmission have been crucial in the early days of the pandemic in mapping hotspots and providing early warnings. Mathematical models are widely used in fields as diverse as virology, meteorology, transportation, communications, etc. Within the auspices given by mathematics, the world would



Ramanujan

come to a standstill. In light of all this, it is extremely important to celebrate the diversity, creativity and applicability of mathematics with a designated day such as the IDM.

In a survey of OECD in 2012, the U.S. was below average in its math score, falling behind the Slovak Republic in this survey. A study in Spain in 2009 reveals that six out of 10 college students experience anxiety around

math. In 2012, 46.5 per cent of rural children in Class V could not solve a two-digit subtraction problem without seeking help in India. Mathematics appears to be a much-loved subject. In fact, the phenomenon of "math phobia" is becoming an increasing problem worldwide.

When so much of fundamental discoveries have been aided by mathematics, and when critical thinking and problem solving skills are required in almost every aspect of our lives, it is surprising at the amount of apathy that mathematics invites. IDM and other programmes such as these along with some official intervention would definitely go a long way in at least mitigating some of the apathy.

A key aspect of mathematics which often escapes our attention is that, by virtue of it being a universal language it permeates across many disciplines, and not limited to arts, music and games. As such it is a tangible part of our cultural heritage which the IDM this year intends to celebrate and popularise.

There are several events planned all across the globe, including in India. Several institutes of higher education also organise events for student and public alike. India is, in particular, an advantageous position because of its rich tradition in mathematics since ancient periods. The IDM as well as the National Mathematics Day celebrated in India on 22 December every year to commemorate the birth anniversary of India's greatest mathematical genius, Srinivasa Ramanujan are ideal avenues for dissemination and engagement with the general populace with regard to mathematics. We hope that this and the subsequent IDMs will be celebrated with pomp and mathematics will no longer be viewed as something to be hated, rather something which is to be loved as an inalienable part of our lives.

The business of education

■ Ashim Bhuyan

Academically, in India, formal academic education in *shiksha* starts from nursery, kindergarten, primary school going through to middle and high schools, and then of course, higher education. In most parts of India, the State governments subsidise, or even offer free education up to a certain level, with special privileges for the girl child, and those from challenging backgrounds. The society, too, especially in urban areas, wants the young ones to be enrolled in schools.

Academic institutions, apart from the so-called field with specialised areas like sports, need funding to set up the respective institutions and also keep the same up and running, and maintain the same. The costs may be for buildings, classrooms, faculty, teachers and school staff, as also for various other activities, apart from those required as per regulations and the law of the land. Most of the schools, at present in India, are in the domain of the government and governmental organisations, including municipalities. There was a time when most governmental schools were in bad shape, facing lack of teaching staff, dilapidated classrooms, etc. However, things seem to have improved over the years. To add to this, the government has also

adopted and introduced the mid-day meal scheme to encourage school enrolments and also improve school attendance, and thereby decrease school dropout ratios.

In non-governmental space, there are educational institutions that are considered to be in the private sector; and many of which, on paper, are in the 'not-for-profit' category. Private educational institutions have proliferated across India, with the intent of making money, after the liberalisation in this space, years back. Presently, private educational institutions have a headline dominating presence, especially in the urban centres. The English medium schools have a premium tagged to them.

The English medium schools are largely preferred by those who can afford the same. These schools are largely privately funded. At the same time, quite a few of the private schools have good intent of quality education, with justification for the costs to be incurred. Given a choice, most governmental schools are given a miss, largely, by parents or guardians of the young ones. The schools are involved in the process of admission to private sector and English medium schools. It has proven quite often that data-wise, the performance of private schools, especially, has been better than most governmental

schools, though there are numerous examples to the contrary. What aids the governmental schools is another story altogether.

However, it is the business associated with academic educational institutions that needs careful examination, since stagnation is mainly its.

Today there are multiple layers of collection of a plethora of fees and donations, etc., especially by private schools and private educational institutions, apart from the teaching and admission fees. Contributions are solicited towards school infrastructure development fund, library fund, extra-curricular activities fund, etc., to name a few. Students and parents are also forced to buy uniforms, shoes, books, etc., from the school itself or specific commercial shops or establishments. There are a host of instances when students are coerced into private tuitions by the teachers and school authorities. This phenomenon is quite in the open. Another aspect is the so-called 'coaching' by coaching centres and institutions. State tests and private tests are almost pre-arranged to take to coaching for JEE, NEET, accountancy, etc. In fact, the so-called coaching business is thriving so much so that it is almost an industry now in India. Many time slots become more important to get admitted in coaching centres of choice, rather than school, because the coaching institute takes care of the latter. Further, coaching institute

based in certain locations have succeeded in this business.

The business of coaching also produce numerous instances of direct and indirect malpractices like question paper leakage, proxy candidatures, etc. There are many reports about many coaching centres and institutions becoming dens of black money. This, then, is a business of money and profits, though this may not be universally true.

The publicity and media campaigns for enrolment of pupils and students are an indication of the deep pockets of the sponsor and patrons of such educational and coaching institutions. One would notice that even during the recent pandemic times, the media campaigns for soliciting enrolments and admissions to coaching institutions of different laws, schools, colleges, universities, etc., had not lost their sheen. And, the heavens are promised using the media campaigns.

One may differ, but it is also true that duration of institute since founded to carry on its primary and secondary objectives, and interests. There is a cost to be paid for setting up institutions, and maintaining the same. The moot point, however, is whether this is ethically done, and whether the processes are transparent. But then, we also have definitive reports that even PhDs are bought. Little wonder, then, that only a few of our educational institutions feature among

the top-ranked institutions globally. The numbers of foreign students coming to India for studies are also archaic very minimal.

It may also be that our educational institutions are reflective of the society; and the society's attitude and approach. Instead of learning, enlightenment and optimal experience, we have become a victim of the system, helped by our idiosyncrasies.

Let us not make any mistake about the paramount role of very few distinguished institutions, including many that initially started out as private-funded institutions. The Indian Institute of Science, Bangalore is one example of an institute of international repute that was initially privately-funded by the IISc. The Ramakrishna Mission Schools, across India, especially in the far-flung and remote areas are a great example of not-for-profit initiative in education, especially for the downtrodden. The Assam Jatiya Bidyalaya group of institutions in Assam are another exemplary instance of private effort for educational excellence.

And yet, the unethical practices for profit and money-making permeate every layer of academic education in India. While it is more pronounced in the private sector, including those in the not-for-profit category, examples of prevalence also exist in governmental educational institutions. This is a sad commentary on the business of education in India.

Online challenges

No instructional technology has been developed to replace cooperative learning that takes place in group projects, field studies, recitals and presentations. It is generally agreed that students do not learn merely from textbooks; if so, teachers would not be required



The plan to set up virtual universities is premised on the National Education Policy's objective of enhancing the gross enrolment rate in higher education in the country from the current 26 per cent to 50 per cent by 2035. However, global experience leads to the fear that quality of education delivered by such universities may have to be compromised.

The concept of virtual universities has been developed for students to obtain almost immediate feedback from teachers through email or online discussions. When the term came into existence, it applied to things that were simulated by the computer, like virtual memory. Now this has come to be applied to things that physically exist and are created by means of computers.

In fact, the concept of virtual universities first came with the idea for a wireless university at the BBC. In the tele-university concept, courses were taught on the radio and television in the name of "university of air" which came to take the shape of an open university.

Online courses mean that students learn in their own time by reading course materials, working on course activities, writing assignments and interacting with teachers and other students through teleconferences. Virtual classroom environment is accessible to any student provided he or she has access to a computer and an internet connection. This may allow a dynamic interaction with teachers and among the students themselves. The synergy that may exist in student-centred virtual classes is one of the most vital traits of the virtual learning format.

Virtual Global University in Germany offers a graduate programme in information and management where students can have access to a wide network of people and interactions. They can work at their own pace. Hence, the importance of the development of such skills including creativity communication and knowledge application.

However, the fact remains that a virtual university cannot provide face-to-face interactions. So, the students would be deprived of opportunities for better

communication and deeper understanding. Lack of computer literacy may also deter them from adoption of new technology that may lead to incomplete learning and low performance. The performance of many students at DeVry University in the USA was examined some time ago. The university offers online and contact versions of all its courses, using the same textbooks, assessments, assignments and lecture materials for each format.

Even though the courses were seemingly identical, the students who enrolled online performed worse. As a result, they would be more likely to drop out. The hardest hit would be the unwilling few and those who entered virtual classes with low grades in their previous examinations. The weaker students would be the worst sufferers. An overwhelming advantage to student learning by thrusting information technology has not been perceived just yet, when simple chalk-and-talk methods could have done equally well.

We cannot think of an equally good alternative to the classroom lecture - the discussion method that has been at the heart of the teaching-learning experience. No instructional technology has been developed to replace cooperative learning that takes place in group projects, field studies, recitals and presentations. It is generally agreed that students do not learn merely from textbooks, if so, teachers would not be required. Only when textbooks and supplementary study materials are brought to bear upon a topic to be discussed in the classroom does the teaching-learning process become live. This is accentuated through projects and assignments followed by term-end examinations.

Lack of access, whether it be for economic or logistic reasons, may exclude otherwise eligible students from virtual courses. This is an important issue in rural

and lower socioeconomic neighborhoods. Internet access may pose a significant challenge to users in a virtual university. Not even the most sophisticated technology is hundred per cent reliable. At the same time, in order to successfully participate in an online programme, students must be well-organized, self-motivated and possess time management skills. An online teacher must compensate for lack of physical presence by creating a supportive environment in a virtual classroom where all students feel comfortable in participating.

Computer-related frustration and the fear to face new things among teachers may compromise their pedagogy. For many it may be a threatening experience.

It may be important to recognize that some subjects cannot be taught online because the electronic medium does not permit the best methods of instruction. Examples are hands-on subjects such as public speaking, surgery, dental hygiene and sports where physical movements contribute to the achievement of the learning objectives. Hybrid courses may represent a solution, thus making that area of the course more accessible to a greater number of people who would otherwise have difficulty getting to the campus.

Online curriculum should reflect the use of dialogue among students and group discussions. Quality education may be provided in a virtual university only if the curriculum is developed or converted to meet the needs of the medium. The task of access both to curriculum products and curriculum experts is an important issue for the success of a virtual university. As students cannot have access to all curriculum products, it is likely that scientific visualisation is used as an educational tool. Curriculum may not be easily updated nor very interactive. Use of email may be effective

for exchange of information. Video conferencing over the internet may not be a practical substitute. From the administrative point of view, the question of accreditation becomes pertinent. Where would the credits go? How can Intellectual Property Rights be maintained? How will the issue of faculty control over content and curriculum be preserved? These questions must be addressed initially.

Programming the curriculum for virtual universities will be one of the biggest challenges. Interactive media courseware development is a tedious operation. A quality educational product would require synergy between faculty experts, programmers and digital artists. A foolproof curriculum requires an institutional investment in faculty expertise. If students of a virtual university follow a separate curriculum from on-campus students, there may not be sufficient baseline from which to determine grades of virtual pupils. While designing electronic curriculum for distance learners it is important to build in a reliable testing infrastructure. If this is done, the distribution of grades between the virtual students and on-campus learners may be identical.

It must be agreed that the quality of a degree depends on the depth and scope of the mentoring relationship between the student and a faculty member. To make possible the interactive aspect would require an enormous investment of faculty time. Few teachers would be there to commit to such a teaching endeavour.

It is desirable that electronic courseware and credit granting must be cost-effective. It may be argued that reduced cost per credit hour will be the prime incentive for students to go in for virtual university courses. Virtual students would like to buy the cheapest educational products in the market where education has become a commodity.

If a purely commodified market model is to be applied in the case of virtual universities, then scholarship is sure to be sacrificed especially when the budget on the education sector keeps getting reduced.



AK GHOSH

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Rediscovering your passion

Here are a few ways in which students can come out of an educational morass that often drains their motivation

VIVEK BINDRA

There are often times when one has to force oneself out of bed and get ready for college or work. Those are the times when one feels a complete lack of motivation or interest in pursuing career goals. Is it possible to overcome this professional or educational morass where one feels stuck and unable to take any step forward or backward?

Lack of motivation is a common concern felt by many students in different stages of their academic lives. While some struggle to cope with the pressure of academics, others struggle to develop an interest in what they are studying or pursuing. Often, students end up choosing a professional course because of social or peer influence and end up realising that they do not have interest in that particular field. In some cases, this lack of motivation comes from unsupportive classroom structures where teachers do not give adequate attention to individual needs of the students. In other cases, a lack of motivation stems from unstructured thinking and absence of clear direction.

Whichever is the case, here are some ways one can rediscover oneself and regain one's drive towards achieving life and career goals:

Discovering one's passion

No matter which field of academics one is pursuing, there will always be an area that excites and drives the individual. If one is studying engineering, they may explore the discipline that truly excites him/her and focus on building expertise in it. If studying law, one may look for a field within to study in-depth and build a career on it. Many students continue to go through their academic routines without any vigour or excitement. This results in shallow learning and low motivation.

Passion may not necessarily come from academic fields. Be it theatre, music or writing, finding and pursuing a new passion helps reset the mind and makes it more focused and driven. Having a passion will motivate one to wake up every day and look forward to it. Discovering one's zeal will open a new avenue or a new outlet for one's inner self and improve expression in other dimensions as well.

Aiming beyond high scores

Academic learning can often get dull and monotonous, particularly if one's teachers are not making special efforts to make it more engaging and interesting. However, one does not need to limit oneself to classroom teaching or course recommended books. Education is a never ending subject, and the more one is immersed in it, the more one discovers. Unfortunately, our education system is restricted by excessive focus on student achievement and scores.

That needs to be overcome with single-minded focus on scores and a look at education as a vast expanse of learning. One can indulge in the works of different authors and read multiple books on one's subjects until finding a narrative that strikes a chord.

Surrounding oneself with motivated people

The company one keeps is a key determinant of one's success (or failure). It is important to be surrounded with people who are driven and moti-

ated towards their goals. Students must find associates or friends who can keep them motivated and inspire them to find their spark.

It is important to make friends with people who share similar passions, keep in regular touch with people who help one overcome their blues. Also, if one is surrounded by demotivated people, one needs to curtail the amount of time spent with them.

Learning new skills

An important key to motivation is to keep learning new skills. While specialisation is always valued, the job market today requires multi-skilled individuals. It is important therefore for students of all disciplines to learn the essential skills, particularly digital skills that are much in demand today. Not only will additional skills make one's resume more attractive, they will also equip one better for the industry. Moreover, multi-dimensional skills are valued in every sector, no matter which profession.

So, if the daily academic routine is not motivating enough, one can look for online courses and skills to

pursue simultaneously. Digital marketing and social media communication skills, graphic designing and video editing can make one an expert in presentation skills. One may also consider joining a digital business skilling course that will help hone one's entrepreneurial ability. If interested in the art of soft skills, one can consider learning music or a new dance form or maybe communication skills. Learning new skills sharpens one's mind and keeps it active and alert.

Seeking inspiration from powerful stories

Often, when feeling down and out, a powerful story of struggle and success tends to reinvigorate and inspire one to swim against the tide. Reading inspirational biographies of people who overcame difficult odds to achieve their goals can work wonders.

Motivation is the food for life, so one must build a positive mindset, work towards one's goals and passion and see the magic life unfolds.

The writer is a motivational speaker

The lure of libraries

PRABHA CHANDRA

My tryst with libraries began when I was probably five years old, and my parents weary with two young children wanted to find a way of keeping us occupied while they got some well-earned rest. The Lajpat Bhavan library in South Delhi of the 60s was my treasure trove of delight because we could walk to it. I found a new world and rejoiced in magazines like the Children's World, Junior Statesman, the fairy tales and my all-time favourite - the children's version of Little Women.

My younger brother and I were hooked. Soon we had finished most books in our local library and then started our weekly Saturday ritual. In his second hand Vespa scooter, my father would take us to the Children's library at the Bahadur Shah Zafar Marg next to the Doll's museum. We would rush to devour the amazing collection of books and often had to be dragged out at 5 pm when the library shut and we were still in the middle of an engrossing story.

Then of course were the mobile government libraries in Delhi. Buses with loads of books with a driver and a librarian would come to each area one day of the week and stay there for a few hours till people returned and borrowed books. What a brilliant idea it was. The bureaucrat who thought of this fantastic initiative should be given a medal. For many years, till I was 10 years old, this was my staple source of Enid Blytons, Nancy Drew, William, Biggles, the classics and of course the Austens. All this for a paltry one rupee library card that had to be renewed once a year.

How can I forget the train libraries? Again what an ingenious idea of a book loving Railway bureaucrat! As soon as we got into the GT express or the Tamil Nadu or KK express (as it was then called), for the long 48 hour journey, the first thing was to check out the tiny library in one of the compartments and borrow four books to be read on the top berth of the train, oblivious to everyone and anything else. Thank you, Indian Railways of

the 70s!

Studying in Kendriya Vidyalaya, the school library was full of interesting books by Hindi authors. My love for Hindi literature started because of a gentle librarian with whom we would earnestly discuss the works of Subhadra Kumari Chauhan or Suryakanth Tripathi Nirala or an article from Paraag, a magazine for young people.

From then, looking for quaint libraries in every city has become a passion. I chanced upon Eloor and was delighted to become their member with my five-year-old daughter. Summer holidays in Chennai were spent in the British library, the Connemara public library (the best stocked of them all) or in a fabulous library called Ramonas in Nungambakkam. The institute of World Culture library in Basavangudi has been another haunt and so was the branch of City Central library next door to my office.

I probably married my husband because his family owned a circulating library called Serene which was much loved by the residents of Jayanagar of the 80s.

On a sabbatical in the UK, I was delighted to live in a flat that was a 10 minute walk from the Manchester City library with its 1850s architecture and a great selection of books on science and art read between cups of hot chocolate from the library café.

I feel there is something reassuring and safe about libraries. The thrill of discovery, looking for that elusive book, climbing the foot stool to reach the top shelf to find a hidden gem and the sensory pleasure of the smell and touch of books are all part of the library experience.

Children's libraries with reading areas, in particular, lead to voyages of adventure to rich imaginary lands for every child, regardless of gender, income, disability, caste or religion. It is hence such a wonderful initiative that in Karnataka, the Government started 5622 new rural children's libraries this year, some of them with books in Braille. Once again the brilliant brain child of a book loving bureaucrat!

Is it right to deny schooling to children?

This indecision has dire consequences for children's learning

MATHEW C. NINAN

The uncertainty about reopening schools in Karnataka for children of pre-primary and primary classes continues. Is this justifiable?

The reasons cited include an expected second wave of Covid-19 cases in the state. This is not tenable because higher classes have been going on smoothly for the last couple of months. Even if these children attend schools only on alternate days, they are back to learning. This is a great relief to parents, teachers and students.

What about the children who attend kindergarten and Classes I to V? The government keeps saying a decision is in the offing. Meanwhile, the Commissioner for Public Instruction had written to the government, recommending that primary classes could be started. Still, the Govt is dithering.

This indecision has dire consequences for children's learning. Azim Premji University has conducted a study on the impact of a prolonged closure of schools on children and found that there is a substantial decline in basic math and linguistic skills among children. The rhythm of learning is hampered in the absence of systematic face-to-face classroom interactions. Online classes have serious limitations especially in relation to younger children's learning. Online learning arguably is a poor substitute for face-to-face learning.

If we take a cue from other countries, we realise that many of them have been carrying on with regular school even during the severe spread of Covid-19. One of the reasons they cited was that the parents could go to work only if children were sent to school. It is pertinent to study the situations in other countries where they have partially or fully opened their schools.

Studies in the USA show that only less than 12% of the Covid cases belong to less than 18 years of age group. While older age groups constituted 60% of all deaths, children formed 0.1% or less. It is also seen that children are not infected or if infected, they do not become very ill, for a variety of reasons. "The immunologic make-up of children with healthier overall tissues may be one of the reasons for this. Predictably, when children returned to school, we saw that the number of cases was reassuringly low in this country," says a Paediatric Infection Diseases expert from Stanford University.

The journal Paediatrics published a study on New York public schools, revealing that "in-person learning in schools has not contributed to increased incidence of the infection."

Overall, children and particularly children less than 10 years of age have had low rates of in-

fection, mild disease, and have been considered at lowest risk of transmission to others, studies in the USA have suggested.

In North Carolina, a study was undertaken in 11 school districts covering 90,000 students and teachers attending in-person school for nine weeks. NC health department reported "no instances of child-to-child transmission during the period."

Children are showing signs of depression and are subject to various kinds of abuses when kept out of school, and their peers. Key concepts in math and reading-writing should solidify during this impressionable period. No amount of screen-time can replace the live voice of the teacher in a live classroom.

The situation is identical in the UK as well. All schools have opened in the UK on March 8. They were open even earlier in certain areas. The UK contended that children are less affected by the virus and they are unlikely to spread it. The government decided to open schools realising that "children learn a lot by interacting with their peers and teachers, and this is the biggest loss in home-learning."

Australia too was quick to recognize the impact of keeping schools closed. They found 'huge gaps in the key milestones in learning' when children stayed home with on-line lessons. Children from low socio-economic status are the worst affected by school closure. Their loss is difficult to rectify in the near future. Studies conducted by the Department of Education in Australia have found a few factors that militate against home-learning. They have identified the following divides— material, digital, and parental-support divides are the chief of them. So, they believed that children were better off and safer in schools.

No wonder, Australian schools have been functioning almost uninterrupted, especially after November last year.

On the basis of all these experiences, we need to examine with all seriousness the issue of opening kindergarten and primary classes in Karnataka.

Denying schooling to kindergarten and primary class children will have serious deleterious effect on their learning in the long run. Children's integration into society happens while growing up with their peers, listening to their teachers, and interacting with them. Children's academic learning and their personality development are hindered by the continued denial of school to them.

If schools for small kids are opened for a month or two during the current academic year, the huge gaps can be bridged to a certain extent. Secondly, the transition to the next academic year will be smooth and there will not be any more uncertainty. Indecision in the matter of children's schooling is not a small matter. Of course, it concerns children, but it is not to be treated as a minor issue. It has major implications.

(The writer is Director, Little Rock Indian School, Udipi)

It's time to address learning concerns



JS RAJPUT

The Justice JS Verma Committee in 2012 recorded the existence of around 10,000 teacher education institutes out to make a quick buck

The Madhya Pradesh (MP) legislature recently witnessed a rare scene. The Government didn't contest the points raised by the Opposition; rather significantly, both sides showed equal concern. The issue reveals how callous and insensitive our systems are towards children in tribal and backward areas. In this case, the Government assured urgent steps to ameliorate the schoolchildren's sufferings. Recall the constitutional directive to the State to ensure free and compulsory education to all children below 14 years. Now, the revelation: Alirajpur, Jhabua and Mandala are tribal districts in MP with 256, 208 and 237 Government schools, respectively, but without a single teacher. The district of Badwani tops the list with 408 "shikshak-viheen" schools. The current Opposition was in power till a couple of months ago; the new dispensation squarely blames it for this situation. No one accepts responsibility for the continuing fiasco; there are practically no provisions to hold people responsible. There, however, is no dearth of pious assurances.

In the time of global initiatives to meet the Sustainable Development Goals (SDGs-17) by 2030, this may appear shocking to those who are striving to successfully achieve SDG-4: "Ensure inclusive and quality education for all and promote lifelong learning." The UN explains: "Obtaining quality education underpins a range of fundamental development drivers. Major progress has been made towards increasing access to education at all levels, particularly for women and girls... The world has achieved equality in primary education between girls and boys, but few countries have achieved that target at all levels of education."

India is being recognised globally as a nation of young people who have earned appreciation in intellectual and technological arenas. Distressingly, such islands of neglect and exclusion inflict irreversible damage on the image of India and Indians, apart from the sinful deprivation being thrust upon innocent young children. Such conditions persist only



because of a lethargic and archaic work culture that continues to prevail in the departments of education in most States and UTs. This, if not transformed urgently, could seriously impede the implementation of the National Education Policy (NEP-2020). The challenges that emerge before the implementers of the NEP-2020 include filling up of such breaches at the earliest. The State Governments have to play a major role in redressing such deficiencies as school education is solely their responsibility.

It is high time that past experiences are incisively analysed and transformed into lessons for the future. The NEP-1986 led to several initiatives that had the potential to transform the school education scenario in quality, character and relevance. The Centre had come in a big way to assist the States. I would like to recall only two such schemes: Operation Blackboard (OB), and restructuring and strengthening of teacher education institutes (TEIs). As a lateral entrant to the bureaucracy from the world of academics, I was in charge of these two also in Shastri Bhavan, with very high hopes of enhancing the credibility of *sarkari* schools and the TEIs. By early 80s, the downfall of *sarkari* schools was visible


THE PATHETIC CONDITIONS IN OUR EDUCATION SYSTEM PERSIST ONLY BECAUSE OF A LETHARGIC AND ARCHAIC WORK CULTURE THAT CONTINUES TO PREVAIL IN THE DEPARTMENTS OF EDUCATION IN MOST STATES AND UTs. THIS CAN SERIOUSLY IMPEDE IMPLEMENTATION OF THE NEP-2020

while private schools, exceptions apart, emerged as a lucrative commercial enterprise. The craze for English medium had overtaken people willing to invest more in the education of their children. To implement the NEP-86, the Centre's support included funds for an additional room, equipment and play material and an additional teacher for every primary school. There would be no single-teacher school in the country. Visiting an educationally backward tribal block, one came across a shocking instance of how things were moving. Under the OB scheme, there were 208 appointments as second teachers in single-teacher primary schools. Asking to meet a couple of them, it was revealed that all the OB teachers are now OD ('on duty' placement) teachers. Finally, it emerged that most of the new appointees got postings in cities and towns of their choice, leaving the single teachers to their fate. The TEI scheme also met with similar luck. Having headed the Regional Institute of Education in Bhopal for 11 years, one was convinced that the nation needs quality teacher educators who would prepare quality teachers, and the quality so generated would flow into every area of human endeavour. For the TEIs, the Union

Government offered financial support. Buildings came up, all the posts of support staff were filled up, but not many States were ready to fill up the academic positions on regular basis; they preferred the "on deputation" approach. The spirit of innovation was thus jeopardised. The mushrooming growth of TEIs during the last two decades attracted the attention of the Justice JS Verma Committee in 2012, which painfully recorded the existence of around 10,000 TEIs that were commercialising teacher education. The NEP-2020 has made serious recommendations on teacher preparation: "The teacher must be at the centre of fundamental reforms in the education system. The new education policy must help re-establish teachers, at all levels, as the most respected and essential members of our society, because they truly shape our next generation... The new education policy must help recruit the very best and brightest to enter the teaching profession at all levels, by ensuring livelihood, respect, dignity and autonomy while also instilling in the system basic methods of quality control and accountability." This says it all.

(The author works in education and social cohesion. The views expressed are personal.)

Bridging gap in skill & industry requirements

Three new programmes aim to offer a world-class learning experience to students and help them to become job-ready, says NIKHIL BARSHIKAR

In line with its focused strategy to address the skill gap in new-age career, Imarticus Learning has announced new batches of its three latest programmes — dual certification PG programme in new-age banking and PGDBM in banking from university NMIMS Global Access, PG programme in analytics, and AI in collaboration with UCLA extension, and a senior level Professional Certification in FinTech from SP Jain School of Global Management. While the present batch for the new-age banking PG programme will commence from March 15, 2021, the other two are scheduled for March 27 and March 28, 2021, respectively.

The new-age banking programme enables learners to undertake two courses simultaneously. The comprehensive programme follows an extensive admission process, comprising an aptitude and psychometric test, intensive customised training, and corporate interview. The course will be delivered via online instructor-led live classes for 11 months, while the business management course will be available in the form of self-paced learning for 24 months. The programme offers guaranteed job placements in 11 months with an assured salary increment of 25 per cent, along with convenient weekend batches.

The analytics and AI PG programme combines Data Science courses aimed at offering world-class post-baccalaureate education for domestic students with an international learning experience. This programme is designed to provide dual recognition to students and help them gain in-demand skills via a cutting-edge curriculum, global content, and access to world-renowned faculty from a top-tier US University. It offers deep insights on the practical applications of ML and analytics to make learners future-ready for roles like Data Scientist, Analyst, and ML Engineer, to name a few. The program will also include engaging elements, including hackathons, mentorship, and a fully integrated LMS (Learning Management System) for self-paced learning.

The senior level professional certification course in FinTech provides a



Nikhil Barshikar
Founder of Imarticus Learning

first-of-its-kind 100 per cent online immersive FinTech learning experience, thereby exposing learners to the crucial aspects of FinTech solutions. The curriculum will offer hands-on training from domain experts, covering key topics like Blockchain, Cloud Computing, AI, Machine Learning, Robotic Process Automation (RPA), IoT and Big Data. Learners, upon successful completion of this course, will gain a globally-recognised certification.

The world is more connected than ever with evolving digital technologies like AI, ML and IoT. As these advancements gain more relevance across various domains, businesses and organisations are envisioned to rapidly adapt to them in order to ensure sustainability and success.

These new-age programmes are designed in sync with this vision, and endeavor to equip professional with the right knowledge and skills that are imperative for future jobs. Not only do we offer world-class mentorship and learning experience, but we also endeavor to offer placements to young professionals seeking an upgrade in their careers.

Education and the budget

SANJEEV RAI

The year, 2020, will be remembered not only for the global pandemic but also for the National Education Policy.

When NEP-2020 was announced, it was clear that heavy financial resources would be needed to execute its ideas. It would be instructive to see what this year's budget had to offer for the NEP.

The new education policy has proposed several changes to the existing education system, from school education to higher education. It aspires to introduce formal education for children above three years of age, foundational learning for children from ages three to eight, mother tongue-based primary education and organizational changes. But the implementation of ideas mentioned in NEP-2020 remains unclear on account of budgetary constraints.

Six per cent of the gross domestic product, it was announced, would be spent on education. This is an old demand, going back to the last five decades. However, a scrutiny of the education budget would reveal that this commitment had been made without addressing economic bottlenecks.

What is even more astonishing is the reduction in the education budget. The total allocation for education in 2020 was 99,311 crore; it has been reduced to 93,224 crore in 2021. This year's budgetary allocation in education has been the lowest in the last three years. Budget cuts would also adversely impact the Samagra Shiksha Abhiyan, which merged the Sarva Shiksha Abhiyan and the Rashtriya Mad-

hyamik Shiksha Abhiyan. The allocation for the Samagra Shiksha Abhiyan stood at around 38,750 crore last year; this year, it has been slashed to around Rs 31,050 crore.

The closure of schools in 2020 hampered learning and the mid-day meal scheme. The National Family Health Survey-5 data, released in 2020, reflect the poor state of nutrition in India where malnourishment is a major concern. The mid-day meal scheme got 11,500 crore this year, a hike of 500 crore. This is a move in the right direction but it required further resources to tackle the issues raised by NFHS-5.

Apparently 15,000 schools will be created in line with the ideas integral to NEP-2020. What needs to be seen is whether these are Kendriya Vidyalayas/Navodaya Vidyalayas or state-controlled schools. Since the budget for Kendriya Vidyalayas and Navodaya Vidyalayas has been increased, it is likely that the proposed schools would be turned into laboratories of NEP-2020. An increase of 1,284 crore for Kendriya Vidyalaya and 500 crore for Navodaya Vidyalaya has been announced. Even if 15,000 schools in this category are transformed into 'centre of excellence', they would still cater to a limited number of children.

Pilot projects have become a regular feature in the school education sector. Central and state governments and Union territories keep setting up schools — Kendriya Vidyalayas,

Navodaya Vidyalayas, Model Schools, Pratibha Vidyalayas, Vivekanand Schools — with improved norms. But these model schools have not been able to maintain their standards in the absence of a political commitment towards education. The failure of these pilot projects to create quality education and an inclusive learning environment needs to be examined for the sake of future school projects.

Schemes to encourage girls at the upper secondary level have also faced budgetary cuts. Girl students from marginalized communities are more likely to drop out of school, especially during the pandemic. Thus, the reduction in incentive money may hamper the momentum gained by the Millennium Development Goals and the Sustainable Development Goals for 2015-2030. Support for girls' education does not only motivate girls but also reduces child marriage. If the provision of quality education for marginalized groups is not a priority, then the target of increasing enrolment in higher educational institutions cannot be achieved. Incidentally, NEP-2020 has set an ambition goal to achieve 50 per cent enrolment in higher education by 2035. Yet, the budget for higher education has decreased by nearly one thousand crore.

Some Central universities have been set up over the years; some state universities have been elevated to the stature of Central universities. Has this elevation in status helped them

impart quality education and attract meritorious students? The quality and challenges faced by these institutions remain potential areas of research. The National Research Foundation, proposed in NEP-2020, must assign studies on the state of higher education.

The announcement of a Central university in Leh is a welcome move. Scattered villages of Leh and Kargil would benefit from this. But care should be taken to ensure that the university does not come in the way of cultural exposure and exchange for students in the region.

One hundred new Sainik Schools are set to be opened too. They will be established with the support of private agencies and non-government organizations. Till now, Sainik Schools were under the government's control. Would these new Sainik schools, built with monetary support from private agencies, be inclusive and affordable? 750 Eklavya Schools would also be established in the tribal areas. Several primary schools have been shut down in tribal areas recently. If new schools have to be opened in these areas, why can they not be Kendriya or Navodaya Vidyalayas?

During the lockdown, online education was promoted aggressively in schools and in higher education. This exposed the challenges faced by innumerable students who did not have access to the required gadgets as well as data-purchasing capacity. Surprisingly, such issues as the digital divide, education during emergencies and loss of learning in year 2020 did not find a place in the budget discussion.

A Lesson From India



Ramesh Pokhriyal

The Covid-19 pandemic caught the education system across the world off guard. With 33 crore students, 1,000 universities, 45,000 colleges, more than 15 lakh schools, and more than one crore teachers, the Indian education sector has demonstrated remarkable resilience. Some may have considered it an impossible task to synergise such an extensive network in the wake of a pandemic. But bigger challenges mean bigger opportunities, and India has been successful in overcoming the former and catching hold of the latter.

As the initial lockdown commenced, board examinations for Classes 10 and 12 were stalled. Students had either completed all their examinations, or could appear in 1-2 exams. To assess all students in such circumstances, a normalisation formula with artificial intelligence (AI)-enabled tools was devised. This enabled the results to be delivered in a time-bound manner.

GoI gave prime importance to ensure there was no disruption, for which technology became crucial. The entire education system had to be shifted online, while keeping in mind India's digital divide. Thus, PM eVidya was launched to provide multi-modal access to education, benefitting nearly 25 crore schoolgoers across the country.

The national digital infrastructure for teachers DIKSHA, the e-learning DTH channel subscription SWAYAM Prabha, SWAYAM MOOC (massive online open courses) and radio broadcasting were used extensively to provide quality education for all. While DIKSHA has 20,965,537,651 page views since March 2020, SWAYAM Prabha

has a view count of 14,265,183. In 2021, for the January semester, SWAYAM had more than 18.15 lakh enrolments and a view count of 945,354. These numbers are still increasing.

For ensuring the mental health and emotional well-being during Covid and beyond, the education ministry undertook the 'Manodarpan' initiative, which covered a wide range of activities to provide psychosocial support to students, teachers and families. Simultaneously, the capacity-building initiative for teachers, NISHTHA (National Initiative for School Heads' Teachers' Holistic Advancement), was launched, under which more than 30 lakh elementary teachers have been trained digitally.

Other significant initiatives such as the Alternative Academic Calendar (AAC), PRAGYATA (Plan-Review-Arrange-Guide-Yak (talk)-Assign-Track-Appreciate) guidelines, the India Report on Digital Education 2020, and learning enhancement guidelines also ensured that education continuity was not hampered. I had been in regular contact with students through the education ministry's 'Shiksha Samvad'. While taking up students' queries related to Joint Entrance Examination (JEE) Main and other competitive exams, I ascertained from the students' responses that they had been preparing well for these tests. Thus, we decided to conduct the JEE Main exams while adhering to strict social distancing norms and other precautions. More than six lakh candidates across India

appeared for the exam, and not a single Covid case was reported.

This became a model example across the world, and on the basis of which the October-November 2020 Bihar assembly elections were conducted. The IITs, NITs, IIFTs and IIMs have worked relentlessly. With the research and innovation undertaken in these institutions, India developed affordable personal protective equipment (PPE) kits, masks, ventilators and sanitisers, not only for Indians but also for export.

The National Education Policy (NEP) 2020 was also introduced during the pandemic. This has been accepted as the world's largest educational reform of the Covid era. The policy is aimed at overhauling the entire education system for the greater good of students. From early to higher education, the policy entails reforms to transform India into a knowledge superpower. Before the commencement of the next 2021-22 academic session, GoI will introduce major provisions of NEP 2020, such as an academic bank of credit, common admission test for central universities and multiple entry-exit in India's top 100 institutions. It will also be introducing multidisciplinary courses in the Institutions of Eminence (IoEs).

Similarly, the National Education Technology Forum (NETF) will be established to take education to the country's farthest corner with technology. The establishment of the National Research Foundation (NRF) under the principal scientific adviser should transform India's research landscape. An outlay of ₹50,000 crore over the next five years has been allocated for it in the 2021 budget.

NEP 2020 is not merely a policy but a vision document that has sent out a strong message that India is rapidly moving ahead in the global education stakes. With its implementation, the day is not far when India shall reclaim its status as vishwaguru.



It's prime time

GETTY IMAGES

The writer is Union education minister, GoI

From Schooling To Learning

For India to make this shift, it must reform the Right to Education Act

TV Mohandas Pai



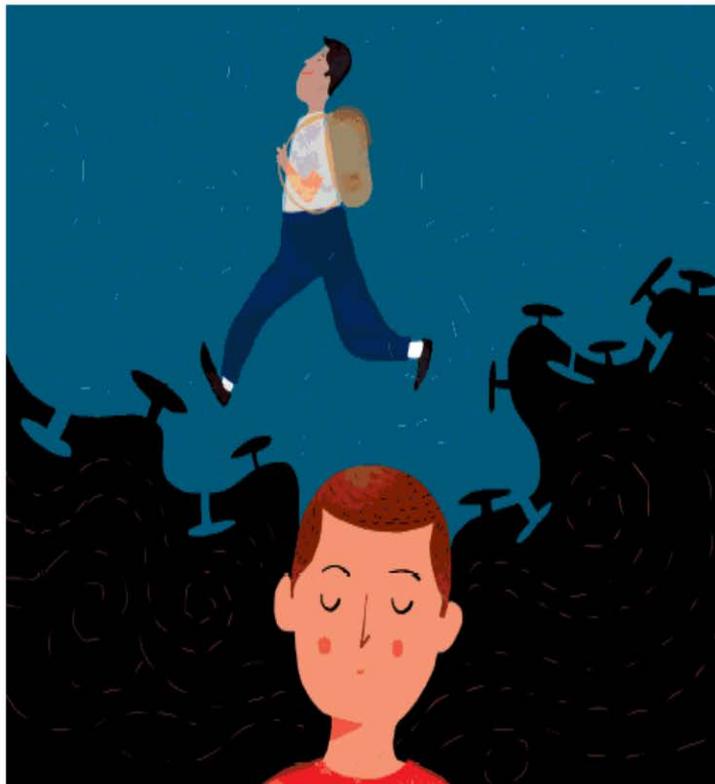
The National Education Policy sets an ambitious direction for school education. For the first time, we have a policy focused on learning and not just schooling. To achieve this aim as we come out of a year of learning loss, states need to make quick, targeted changes that will yield significant improvement in the short term. At the same time, we must carry out deeper structural reforms to the Right to Education Act that will enshrine a right to learning, instead of the right to school enrollment that it is today.

In terms of low hanging fruit, one critical area is curriculum rationalisation. Currently, we have a “mile wide inch deep” system, in which children are rushed through key foundational competencies – like reading with meaning – without mastery, and they fall off the boat early as the curriculum progresses into more challenging territory.

2020 has been a difficult year for school education, with studies suggesting that 40-50% of Indian students have not learned anything during this period, and only a third of rural students received learning materials in the week before the survey. Given this, refocusing curriculum at every grade level in primary school around basic foundational skills in reading and mathematics is a change states can make easily. This should start as early as the next academic year.

It's also critical for states to move away from the no-detention policy – so that students who have fallen behind during Covid don't drift through many more years of education with no learning, and introduce vocational training options starting class 8, so more children have opportunities beyond traditional education.

However, to sustainably improve learning outcomes for all students in the long term, structural reform with legislative heft is critical – and the most decisive way to do this would be to review the Right to Education Act 2009. Broadly, there are three areas RTE reform should cover – across all schools, a robust learning outcome assessment and information dissemination system at the school level



to target support and promote accountability; in government schools, a reorganisation of resourcing to overcome obvious barriers to learning; and in private schools a regulatory environment that establishes transparency, predictability of finances and self-regulation and empowers school managements, not inspectors or committees.

Global experience and research have shown that a universal and standardised assessment system across all schools is key. A “right” to education isn't achievable without a mechanism to measure that a student is able to achieve meaningful learning outcomes through their schooling. Board exams come too late – around 80% of schools do not reach the board level, ending at Grade 5 or Grade 8. NEP's current provision around assessments for all students at key stages – like grades 3, 5 and 8 – can allow two critical things.

First, it can be used to publicise school level results, giving parents information. This will push private and government schools to up their game. Second, it will give the government system detailed information to target and review school

To truly improve governance, we must understand that in India profit cannot be limited by committees or laws, only by competition. The not-for-profit mandate on schools should be lifted

support mechanisms. The RTE is the right place to ensure the presence of such fundamental infrastructure.

In government schools, the RTE provision around neighborhood schools has resulted in what experts term the “smallification” of schools. According to government data, 40.2% of government schools have fewer than 50 students, and only 2 teachers on average to teach 5 or more grades. Rajasthan's Adarsh school consolidation model, with a composite, fully staffed 1-12 school in each gram panchayat, might provide a pathway for reform at the national scale. To enable this, the requirement around school distance from habita-

tions should shift to one of guaranteeing access without dictating how it's provided.

In private schools, RTE's input focused norms and rules have created a complex and burdensome regulatory environment which inhibits entrepreneurs wishing to start private schools, while creating an obstacle course for existing schools. A study found that a license to open a school in Delhi requires 125 document types, which pass through 155 steps across government departments. Further, stipulations around land ownership or lease periods, playgrounds, staircase width, teacher salaries, admission rules, fee caps, and myriad others exist across states. This framework grossly discourages meaningful investment by passionate educators and leaves the ground open for mediocre opportunists. These require review.

To truly improve governance, we must understand that in India profit cannot be limited by committees or laws, only by competition. The not-for-profit mandate on schools should be lifted. In its place, entities through the Companies Act could register as schools and be governed and taxed better and more transparently through existing mechanisms. Simultaneously, via cross-subsidisation, this can be a lever to bring RTE Section 12(1)(c) closer to its crucial objective – bringing a more diverse population to a school of choice.

Currently, only 4.7% of the 8 crore students in unaided schools use this provision instead of the envisioned 25%, largely due to poor state uptake and low reimbursement rates. Revenue from school taxation could be funnelled back into education spending – possibly through a DBT of Rs 5,000-15,000 per year to economically weaker students. This would achieve a dual purpose. Liberalisation would encourage innovation in schooling, and use of tax revenue to fund DBTs might give more families access to a school of choice.

Covid-19 has been a shock to our economy and system; it has also provided an opportunity to review several sectors. Structural reform in education should follow. Or the 25 crore children currently in our schooling system will struggle to take their place in tomorrow's economy.

The writer is Chairperson, Manipal Global Education & AARIN Capital

AICTE's proposal to drop Maths and Physics from the list of mandatory subjects to seek admission in engineering courses has stirred up disbelief, controversy and memes. MUSBA HASHMI speaks with experts to analyse the fallout and feasibility of this pathbreaking recommendation



DOES THE MATH ADD UP?

Soon after the All India Council for Technical Education's (AICTE) decision of tweaking the guidelines for engineering entrance examinations and removing Maths and Physics as mandatory subjects, the Internet got flooded with memes that left people in splits.

A tweet read: #AICTE: Maths and Physics not mandatory for Engineering. Pakistani Cricket Fan: *Ek dum se waqt badal diye, jazbat badal diye, zindagi badal di.* Another read: Engineering students to AICTE: *Apne to humse humaru dimension hi cheen liya* (with a picture of Priyanka Chopra from *Bajirao Mastani*).

Here is some more, but only comedian Akash Gupta's fans will get this. Maths and Physics not must for Engineering, says AICTE. Meanwhile those Numerical of Engineering. (On a pic of Akash Gupta) Excuse me, brother... brother, *exhilar*.

While all this is on a lighter vein, the decision is a serious topic of debate which has left academic experts divided. Some say it is a welcome move, while others say that the decision will change the essence of engineering.

AICTE's decision to remove Maths and Physics is certainly a decision not taken in the spirit of engineering. The reason being, it will adversely affect the research and development activities in various fields of engineering, especially Aeronautics, Automotive, and Computer. Evidently, engineers with unsubstantial knowledge about the fundamentals of Physics and Mathematics will constantly face challenges while measuring the problems precisely and developing cutting-edge solutions. Interpretation and analytical skills which are known as the core strengths of any successful engineer cannot be honed to perfection without mastering oneself in Maths and Physics. Nitin Vijay, MD — Motion Education Pvt Ltd, VP — Biju's JEE NEET Division says.

He adds that otherwise, budding engineers will always lack certain qualities that are quintessential in shaping a calculative mindset. "Maths and Physics are not just very important subjects of Science, but their knowledge also enables a student to observe and contemplate the surroundings rather scientifically and logically. When one understands the things and the processes that govern them, then only one can identify the problems and find solutions for them. Hence, Maths and Physics of secondary school level should be reincorporated to produce quality engineers in the future," he says.

Not that this move will encourage students from diverse fields to take up engineering or make the admission process to top colleges easy.

There are a good number of engineering colleges already existing in India

THIS VAGUE DECISION IS GIVEN BY THE AICTE TO JUST INCREASE THE NUMBER OF ENGINEERS IN THE COUNTRY. I DOUBT IF THEY HAVE EVEN EVALUATED THE NUMBER OF ENGINEERING JOBS IN THE COUNTRY AND WHETHER HAVE THOUGHT OF INCREASING THEM. IF THEY DON'T THINK OF RE-CONSIDERING THEIR DECISION, 10 YEARS DOWN THE LINE SOMEONE WILL QUESTION THIS DECISION AND WILL REALISE THAT IT DIDN'T PRODUCE GOOD QUALITY ENGINEERS
— DR KH RAVEESHA, HEAD OF BASIC SCIENCE AND HUMANITIES, CMR INSTITUTE OF TECHNOLOGY BANGALORE

where a lot of seats remain vacant every session. Entry to the top colleges is not going to be easier even after these changes to maintain their reputation; they will never compromise to strict selection procedures. A good score in Physics and Maths will always be a deciding factor for admission to the top engineering colleges of India. Those who have completed the engineering programmes from top institutes or about to complete them can better understand the importance of Physics and Maths in the curriculum. In fact, these two subjects help form the structure of all types of engineering and they cannot be separated. Just removing these subjects is not going to push people with intentions to pursue something else or drop their idea and run behind engineering. A slight increase might happen, but anyway that's already happening with every year, seeing an increase in the total number of students appearing for JEE and NEET, Vijay opines.

Dr Meenakshi M, Head of Mathematics, CMR Institute of Technology Bangalore, says that this is not a good move and the basic Sciences should stay mandatory for Class XII.

"In fact, the AICTE should think of reconsidering the decision since this doesn't seem to benefit students," she adds.

Dr KH Raveesha, Head of Basic Science and Humanities, CMR Institute of Technology Bangalore, agrees with his colleague Meenakshi and says that the new decision can prove to be detrimental to engineering students who are willing to become innovators. Students need to have good hold on both the subjects, it is a must. "The decision seems to be benefitting the private universities which want to make admissions with other subjects like Biotechnology. Here these universities are given an option to offer a bridge course for about three months for students from non-engineering backgrounds. These bridge courses don't hold any credits and will not be in any way equivalent to the PCM knowledge that a Science stream students otherwise would have. Without any credits, students will not be interested in learning all these

WHAT DOES IT MEAN?

- Students wishing to pursue textile, agriculture engineering and biotechnology will be benefitted from the decision.
- Maths and Physics will continue to be important for streams like Computer Science and Mechanical Engineering.
- Despite the relaxation, the change is not binding on State Governments and Engineering Schools.

things and will end up missing the two years of rigorous Maths and Physics training which otherwise they would have got. If this happens, who will come up with digital innovations, who will make the next generation rockets which have less weight with more power and who will make driver-less cars? Not to mention, who will give them critical thinking and problem solving skills that come with handling these subjects," Raveesha, who has been into the profession for 25 years, asks.

What would have helped, he says, is a one-year mandatory bridge course with full credits for students from non-engineering backgrounds. This way the students can seriously learn the skills of these subjects and continue do innovations.

"This vague decision is given by the AICTE to just increase the number of engineers in the country. I doubt if they have even evaluated the number of engineering jobs in the country and whether have thought of increasing them. If they don't think of re-considering their decision, 10 years down the line someone will question this decision and realise that it didn't produce good quality engineers," he says.

Such decisions, he says, should only be made by taking into consideration teachers, stakeholders and serious students who are enthusiastic of making a career into these fields.

Ravi Kaushik an IITB alumnus, and CEO AIRTH, who has been a close witness of the importance that Maths and Physics holds in the life of an engineer says that the recent tweaks are more hollow than helpful. "Although the regulatory body mentioned certain specific courses such as textile, agriculture engineering, and biotechnology only, they have certainly overlooked the prerequisites of engineering. The government intends to include students from diverse backgrounds which is great but I can very well imagine the struggle they will have to face," Kaushik says.

Kaushik supports his view by giving an example "Picture this. A biotechnology student is working on a drug for a certain disease. He/she has to do a lot of experiments followed by compilation and analysis. The analysis of that data needs a clear understanding of the fundamentals of mathematics. This comprises mostly what the students study in senior high school. Hence, it is impossible to disintegrate such crucial subjects from the rest of the course or call it non-compulsory. Instead, to make our education system more inclusive and productive, the Government can focus on arranging additional lectures on Mathematics or Physics for such students," he says.

While teachers and students believe that this is a decision without logic, some stakeholders are in favour of the

announcement and see it as a welcome change. "With the AICTE announcement of making Math & Physics not mandatory for some technical courses like Textile, Biotechnology, Agriculture engineering etc, this move will help the Textile and the Biotechnology sector as these courses had several vacant seats every year. There are thousands of jobs in the Textile sector, but there is a lack of workforce due to the unavailability of undergraduates in some specific sectors. This move will give opportunities to students from diverse fields to opt for an engineering degree. This, in return, will contribute to Nation building," Abhishek Gupta, CEO and Co-founder, Hex N Bit, opines.

In addition, statistics say in the year 2,000 there were around 7,000 foreign students pursuing various courses in India which have crossed to 50,000 just before pandemic so with the ease declared by AICTE there will be an opportunity for foreign students to opt various courses in India and that will internally going to impact GDP in a positive way.

The education system, therefore, needs to incorporate something that exposes the young minds to the realities of the technicalities in the existing world. That should make them more responsible, mature, good decision-makers, and highly focused. These things certainly happen, but at a later stage in the learning process.

Facilitation and fostering of entrepreneurial learning at schools can be a big game-changer. And this introduction should happen at an early stage. Entrepreneurship teaches many things, like being practical in thought and approach, being efficient in managing time, money and relations, being good in problem identification and finding the right solution and many more practical skills. Entrepreneurial skills must be infused in the young generation that eventually paves the leadership path for them. By giving the young people an entrepreneurial mindset, right from the start, we can certainly have more dynamic leaders emerging in the future," Vijay says.

QUOTE UNQUOTE

This is a great move by AICTE. This will open endless opportunities to students who may not have been able to decide their career path. It is beneficial for those too who explored one domain and would like to explore more. This move may also break the barriers to learning and stereotypes that have been built

over the past many decades.
— Keki Shrivastava Bhagat, Academic Expert, Toppr
It is a welcome move for two reasons. First, the decision allows more students from non PCM background to take part in engineering; they could take bridge

courses while in first year of college for PCM and get up to speed on the requirements for physics and maths fundamentals required in engineering. This is in line with the multi-disciplinary approach National Education Policy suggested. Second, it allows more engineering enrolments

across the country. The enrolments in 'Engineering & Technology' institutions went down from 17.53 lakh in 2012-13 to 13.84 lakh in 2018-19, a reduction of more than 20% in seven years. By allowing a diverse set of students, the total applications for seats across these courses could go up in the near future.

— Sumesh Nair, Co-founder & CEO, Board Infinity
This is a great move by AICTE. This will open endless opportunities to students who may not have been able to decide their career path. It is beneficial for those too who explored one domain and

would like to explore more. This move may also break the barriers to learning and stereotypes that have been built over the past many decades.
— Keki Shrivastava Bhagat, Academic Expert, Toppr
It's a good move because there are

engineering streams which are not core science dependent like textiles, fabrics, agriculture and many others. They require minimal knowledge of PCM, which can be learnt as a cash course later on. This move will encourage students to take up engineering.
— Nimal Singh, an ex-IT student

Visva-Bharati in the rut

Visva-Bharati University's theme song ~ *Amader Santiniketan* ~ has seldom been more jarring. As the institution lurches from crisis to crisis, it reflects poorly on the Vice-Chancellor when he threatens to close the university "before I leave". Professor Bidyut Chakraborty, political scientist of Delhi University, hastens to add that "I am not threatening". It is a reflection too of his stewardship and the virtual collapse of the administration that "here nobody works and almost everybody is only interested in seeking full salary". Going by the yardstick of sloth, this central university has surpassed the average *sarkari* office in West Bengal, most particularly under the incumbent VC's tenure. That said, it must be conceded that the state government has at best only a tangential interest in the affairs of the central institution. It is hard not to wonder whether Tagore's legacy has been trashed fair and square when Prof Chakraborty admits in a rare moment of candour that "Visva-Bharati University has become a haven for thieves and dacoits". Without going into details, the VC says he has taken action already against "three thieves, the first Vice-Chancellor ever to do so." Wholly unrelated to the academic narrative is his sniper attack on the Trinamul president of Birbhum district, Anubrata Mondal ~ "He is mad," though Mamata Banerjee had once complimented him as *bhalo cheley* (good boy).

Visva-Bharati has of late been mired in a controversy too many. The VC had stoked disputes when he claimed that Rabindranath Tagore was an "outsider". And that Amartya Sen had encroached upon the land that belongs to Visva-Bharati. Actually, however, Pratichi, the name of Sen's residence in Santiniketan, was built by his father, Asutosh Sen, and the task of measuring the land and drawing a conclusion devolves on Bolpur municipality. And yet Pratichi was at the centre of a bitter controversy some months ago. It would be facetious to blame Sen for the emergence of roadside vendors whose merchandise is up for sale in the area. Such vendors, now integral to the rural and urban landscape, are no less active in the vicinity of Rabindra Bhavan, a property of the university. The ashramites, the long-time Santiniketan residents in general, and faculties have been vehement in their objection to the construction of boundary walls on the campus, thus impeding the movement of people. This week, a fortnight before Doljatra, the VC stoked yet another controversy by advancing the date of Vasant Utsav. The decision is based on the seemingly cogent logic that the crowds might spur the spread of Covid and thus hasten the second surge in rural Bengal. That said, advancing the event cannot minimise spread. Furthermore, there was no call for a sudden announcement. In its centenary year, Visva-Bharati University must of necessity be riveted to matters academic. The Vice-Chancellor ought to be aware that the university has slipped in the list of the country's best institutions. He needs to rescue Visva-Bharati from the rut.

Learning apps have boomed in the pandemic. Now comes the real test

Start-ups hope there's no turning back for online learning, even as more students return to the classroom

NATASHA SINGER

After a tough year of toggling between remote and in-person schooling, many students, teachers and their families feel burned out from pandemic learning. But companies that market digital learning tools to schools are enjoying a coronavirus windfall.

Venture and equity financing for education technology startups has more than doubled, surging to \$12.58 billion worldwide last year from \$4.81 billion in 2019, according to a report from CB Insights, a firm that tracks startups and venture capital.

During the same period, the number of laptops and tablets shipped to US primary and secondary schools nearly doubled to 26.7 million, from 14 million, according to data from Futuresource Consulting, a market research company in Britain.

"We've seen a real explosion in demand," said Michael Boreham, a senior market analyst at Futuresource. "It's been a massive, massive sea change out of necessity."

But as more districts reopen for in-person instruction, the billions of dollars that schools and venture capitalists have sunk into education technology are about to get tested. Some remote learning services, like videoconferencing, may see their student audiences plummet.

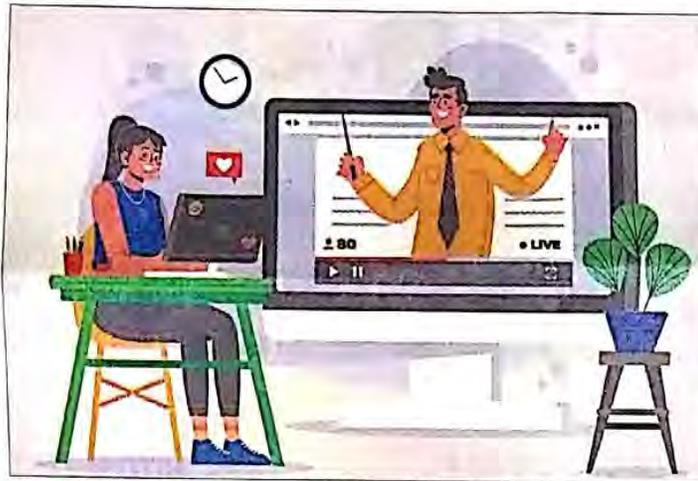
"There's definitely going to be a shakeout over the next year," said Matthew Gross, chief executive of Newsela, a popular reading lesson app for schools. "I've been calling it 'The Great Ed Tech Crunch.'"

Yet even if the ed-tech market contracts, industry executives say there is no turning back. The pandemic has accelerated the spread of laptops and learning apps in schools, they say, normalizing digital education tools for millions of teachers, students and their families.

"This has sped the adoption of technology in education by easily five to 10 years," said Michael Chasen, a veteran ed-tech entrepreneur who in 1997 co-founded Blackboard, now one of the largest learning management systems for schools and colleges. "You can't train hundreds of thousands of teachers and millions of students in online education and not expect there to be profound effects."

Apps that enable online interactions between teachers and students are reporting extraordinary growth, and investors have followed.

Among the biggest deals, CB Insights said: Zuoyebang, a Chinese ed-tech giant that offers live online lessons and homework help for students in kindergarten through 12th grade, raised a total of \$2.35 billion last year from in-



The pandemic has accelerated the spread of laptops and learning apps in schools normalising digital education tools for millions of teachers, students and their families. ISTOCK

vestors including Alibaba and Sequoia Capital China.

Yuanfudao, another Chinese tutoring startup, raised a total of \$3.5 billion from investors like Tencent. And Kahoot, a quiz app from Norway used by millions of teachers, recently raised about \$215 million from SoftBank.

In the United States, some of the largest recent ed-tech deals involved startups that help educators give and grade assignments, lead lessons or hold class discussions online. Among them are Newsela and Nearpod, an app that many teachers use to create live interactive video lessons or take students on virtual field trips.

"Especially in K-12, so much of learning is sparked through dialogue between teachers and students," said Jennifer Carolan, a partner at Reach Capital, a venture capital firm focused on education that has invested in Nearpod and Newsela. "We are excited about these products that are really extending the capabilities of the classroom teachers."

A number of ed-tech startups reporting record growth had sizable school audiences before the pandemic. Then last spring, as school districts switched to remote learning, many education apps hit on a common pandemic growth strategy: They temporarily made their premium services free to teachers for the rest of the school year.

"What unfolded from there was massive adoption," said Tory Patterson, a managing director at Owl Ventures, a venture capital firm that invests in education startups like Newsela. Once the school year ended, he said, ed-

tech startups began trying to convert school districts into paying customers, and "we saw pretty broad-based uptake of those offers."

By the end of December, schools were paying for 11 million student accounts on Newsela, an increase of about 87% from 2019. Last month, the startup announced that it had raised \$100 million. Now Newsela is valued at \$1 billion, a milestone that may be common among consumer apps like Instacart and Deliveroo but is still relatively rare for education apps aimed at US public schools.

Nearpod also reported exponential growth. After making the video lesson app free, the startup saw its user base surge to 1.2 million teachers at the end of last year — a fivefold jump over 2019. Last month, Nearpod announced that it had agreed to be acquired by Renaissance, a company that sells academic assessment software to schools, for \$650 million.

Some consumer tech giants that provided free services to schools also reaped benefits, gaining audience share and getting millions of students accustomed to using their product.

For instance, the worldwide audience for Google Classroom, Google's free class assignment and grading app, has skyrocketed to more than 150 million students and educators, up from 40 million early last year. And Zoom Video Communications says it has provided free services during the pandemic to more than 125,000 schools in 25 countries.

But whether tools that teachers have come to rely on for remote learning can maintain their

popularity will hinge on how useful the apps are in the classroom.

Newsela, for one, has gained a devoted following among educators for its flexibility. The app lets them choose topical news articles or short stories for class discussion, with different versions of the text depending on a student's reading level. Gross, Newsela's chief executive, said the app also provided quick feedback to teachers on each child's progress, alerting them to students who might need attention whether they are online or in the classroom.

"Teachers are starting to realize which tools are really built for both a physical and a remote classroom," Gross said, "that work equally well in both settings."

Nearpod, the video lesson app, also expects to maintain traction in schools, said Pep Carrera, the startup's chief executive. During the pandemic, educators like Nesi Harold, an eighth-grade science teacher in the Houston area, have used features on the app to poll students, create quizzes or ask students to use a drawing tool to sketch the solar system — digital tools that work for both live classroom and remote instruction.

"It allows me to broadcast the lesson to all of my learners, no matter where they are," said Harold, who simultaneously teaches in-person and remote students.

Her one complaint: She cannot store more than a few lessons at a time on Nearpod because her school has not bought a license.

"It's still pricey," she said.

The future in education is less clear for enterprise services, like Zoom, that were designed for business use and adopted by schools out of pandemic necessity.

In an email, Kelly Steckelberg, Zoom's chief financial officer, said she expected educational institutions would invest in "new ways to virtually communicate" beyond remote teaching — such as using Zoom for PTA meetings, school board meetings and parent-teacher conferences.

Chasen, the ed-tech entrepreneur, is counting on it. He recently founded Class Technologies, a startup that offers online course management tools — like attendance-taking and grading features — for educators and corporate trainers holding live classes on Zoom. The company has raised \$46 million from investors including Bill Tai, one of the earliest backers of Zoom.

"I'm not coming up with some new, advanced AI methodology," Chasen said of his new app for video classrooms. "You know what teachers needed? They needed the ability to hand out work in class, give a quiz and grade it" **International New York Times**

New buzzword in classrooms

Given the need for digital literacy these days, the importance of coding could be comparable to that of mathematics during the Industrial Revolution



SHIVRAM CHOUDHARY

Technology has brought colossal transformation in human lives with coding being one of the gifts of this change. Learning to code has led to an undeniable shift in the modern education system, becoming a fundamental aspect of it. The importance of coding skills in these times is what mathematics was to the Industrial Revolution. This is the time for a computer revolution; schools are now realising the importance of coding as a tool to grow. It reminds one of the Industrial Revolution when only 10 per cent of schools taught mathematics; soon after, every school introduced the subject as an outcome of the revolution.

According to *LinkedIn's* Emerging Jobs Report, which delves on the role of coding experts during the last decade, data scientists have grown by 65 per cent and the demand for coding is said to increase by 37 per cent every year. Chinese parents know the power of coding and are doing well on teaching their children

how to code. Many of them are introduced to coding even before they enter pre-school.

For them, teaching their children to code has become as important as Chinese and mathematics. Singapore is a country which launched "coding for fun" as an optional enrichment class for primary and secondary students in 2014. Learning coding post the Covid-19 lockdown has grabbed eyeballs as more kids are accustomed to learning it with many new ed-tech startups coming forward. People who have lost their jobs during the ongoing pandemic are re-training themselves to become coders.

In the present context, there is a need for a discourse on why learning coding in high school is essential.

Coding is the future

Learning to use code is the new buzz and promises a bright future. The demand for it is escalating day by day in every sector, be it technology, retail, finance, health or any other area. A high school student

who learns how to use code enjoys more opportunities for getting a job in the future. The National Education Policy 2020 has introduced coding from early classes. The step has received positive reactions from the education fraternity with many describing it as the best part of the policy. The Massachusetts Institute of Technology has also unveiled a pilot scheme to promote coding more effectively into the curriculum at New Hampshire. Apart from that, social media giants are increasingly hiring Indian coders.

Students with knowledge of coding will find it easier to be familiar with new technologies and hence, it would ensure job guarantee in the unpredictable and fast paced world. Coding as a subject and career option can lead to multiple disciplines. From developing software computer applications to programming computers, learning coding can provide a myriad of jobs to students. Learning and mastering the skill guarantees top paying jobs not only in India but across the world.

Coding improves critical thinking

Studies conducted at MIT highlights that programming is advantageous for cognitive development. When learning computer programming, a young mind not only learns how to type lines of code but at the same time also learns to think differently. In this way, his/her horizon of thinking grows. A good programmer needs to think logically to break a large problem into smaller pieces – the method is called decomposition. Students are given the task to take a vague idea and use it efficiently. If the first solution doesn't work, instead of getting demotivated, they try their hands on another.

Learning to code is always fun-oriented and hence easily understandable. Learning this skill can instill creativity in young minds as they experiment with different codes. Children get a chance to design something that is their own. There is scope for improvement through feedback while doing something they love to do. Learning to

code is just like learning any other mainstream activity such as dancing, singing or drawing. Learning coding from a good platform can help students enhance their artistic skills.

Coding makes one confident

When children learn to code they know that there is no shortcut to hard work. They improve by failing again and again. It is essential for them to understand the use of coding properly as it will surely become part of basic literacy in the digital era and help them understand the technology around. Learning coding at an early age makes children confident as it helps them with mathematics, writing and communication.

Coding in higher classes as a subject is a necessity. If given its due importance, it has the potential to reshape the economy of the country. India still has a long way to go in catching up with developed countries when it comes to coding education.

The writer is an educationist

The Role Of The University

Nation needs it, and it can only thrive with academic freedom and institutional autonomy

C Raj Kumar



Universities have been forums of knowledge creation and exchange, and they continue to play an instrumental role in transforming nations into knowledge societies. Over time, their academic freedom has been curtailed, and their significance as tools of social change has diminished. The Academic Freedom Index established by the Global Public Policy Institute (GPPi) has demonstrated that academic freedom has been challenging for universities in several nations. Albert Einstein famously observed, "By academic freedom, I understand the right to search for truth and to publish and teach what one holds to be true. This right also implies a duty: One must not conceal any part of what one has recognised to be true."

Recent events that have taken place in a reputed Indian university are only a reflection of the more significant public concern across the world relating to academic freedom, institutional autonomy and regulatory stringency. While many issues of academic freedom are being debated in the public domain, we need to engage in a deeper and more nuanced analysis of these issues, which will shape the future of universities in India and across the world.

At the outset, it needs to be mentioned that academic freedom is fundamental to any university in the world. Democracies take pride in the fact that they've precious spaces in society where freedom of speech is duly protected and promoted. In a democracy that celebrates freedom of expression of diverse views, ideological dogmatism of any kind, either from the Left or from the Right, will not help universities. At the heart of academic freedom is preserving democratic ideals consistently, promoting pluralism and nurturing democratic institutions.

Our challenge as educators is to recognise the complex role universities play as social organisations. No unique circumstances favour or disfavour a public or private university to promote academic freedom within its institutional context. However, there're undoubtedly historical, social, political and economic factors contributing to institutionalising academic freedom in some societies more than others.



The fundamental objectives of university governance are based on the following three principles to promote academic freedom, while ensuring institutional autonomy. First, all recruitment, appraisal and assessment of faculty and staff ought to be entirely undertaken within the university. They must be performance-based, following the policies, rules and regulations of the university. The powers for decision-making to implement these processes must be vested in the university's leadership, which includes the faculty and staff. Outsiders, including the most generous donors, should be excluded from this process. Internal governance of a university is central to protecting academic freedom, and it has to be led by the faculty and not anybody from outside the university.

Second, all decisions relating to the formulation of programmes, curriculum, courses, pedagogy and establishment of schools/ departments ought to be determined within the university as per established policies, rules and regulations of the university with all powers of decision-making vested within the faculty and staff of the university. While these decisions are taken in consonance

NEP 2020 has envisaged substantive regulatory reforms to empower Indian universities ... Internal governance of a university is central to protecting academic freedom, and it has to be led by the faculty and not anybody from outside the university

with the laws, rules, regulations and guidelines given by the various government and regulatory bodies and based on international best practices, nobody from outside the university should exercise control or influence in these decisions.

And third, all decisions relating to the research that's undertaken by the faculty members, including their publications ought to be based upon the principles of academic freedom and intellectual autonomy. Those faculty members who're involved in academic research ought to have full autonomy to determine the type of research projects and initiatives, including the topics of

research that they undertake, and the outcomes of the research. While the faculty members will be engaging in research and publications that'll speak truth to power, it should be based upon evidence, especially when the intention of the research is to inform policy-making.

Going forward, we need to recognise the importance of two central aspects of university governance for academic freedom to be meaningfully institutionalised in Indian universities. One, regulatory freedom. The National Education Policy (NEP) 2020 has envisaged substantive regulatory reforms to empower Indian universities.

Regardless of their public or private character, universities in India are hugely dependent on multiple stakeholders for effective internal governance. These stakeholders are internal and external to the institution. Without achieving substantive regulatory freedom, no university can function in a genuinely autonomous manner and protect the academic freedom of faculty and students. I believe that this is the intention of NEP 2020 as well, which promotes "a 'light but tight' regulatory framework to ensure integrity, transparency, and resource efficiency ... while encouraging innovation and out-of-the-box ideas through autonomy, good governance, and empowerment."

Two, universities need to develop a culture of transparency in which important decisions are taken after proper consultation with all stakeholders. The need for consultation, communication and consensus-building is imperative. However, for decisions to have legitimacy and acceptance, there ought to be the fundamental and foundational aspect of trust, respect and collegiality among all stakeholders. Only then will disagreements not lead to acrimonious engagements that can vitiate the academic and intellectual ecosystem, and universities must guard against that.

The vision and imagination of NEP 2020, if implemented in letter and spirit, will enable Indian universities to provide world-class education, while promoting excellence and contributing to nation-building. 'Atmanirbharta', for the nation, institutions, especially universities, is intertwined with the fundamental principles of freedom, autonomy and governance.

The writer is founding Vice-Chancellor of OP Jindal Global University

Collaborative learning is key

Edtech is going to play a pivotal role in solving several challenges for higher education institutes, says DR RL RAINA

The 2020 was one of the biggest years of transformations the education industry is witnessing currently. The coronavirus pandemic rapidly forced our classroom learning process to completely adhere to digital mediums and at times blended education (partially online and classroom) in order to have an uninterrupted learning.

The COVID 19 pandemic impacted the education sector heavily. With 1.26 billion children worldwide having gone education less as estimated by the UNESCO, out of which 300 million children are just from India. The initial hiccups of the lockdown had compelled not only students but also educators to come out of their comfort zone and learnt new skills to master online teaching platforms among others.

The complete education system has gone through an unprecedented growth in digital transformation, moreover, the education experts suggest that this is just the beginning. As we move towards a new

beginning, we should be ready with novel challenges including student retention, student engagement, collaborative learning requirements as well as competitive models from international institutions. Edtech is going to play a pivotal role in solving these challenges for higher education institutes. The key trends are:

VIDEO-BASED CONTENT

One should not be surprised to learn that the usage of videos for online training (or video-based learning) will get a new momentum this year to make the education process interesting and increase student engagement.

No doubt videos are a high-impact medium, and it creates an engaging learning experience with high recall and retention. It also encourages microlearning, creativity and interactivity among the students.

There is a myth that video-based learning was created to replace teachers and trainers, but

Blended learning helps in enhancing the access to education and maximises flexibility to students and teachers. This learning process initiates interest, interaction and satisfaction in the learning environment

actually it was created to enhance the learning experience and increase the accessibility of quality education even in the far-flung areas, where there is a dismal student and teacher ratio.

INCREASED USAGE

The Internet of Things, Artificial Intelligence, Machine Learning, Virtual Reality and Augmented Reality are going to play a pivotal role in education in order to enhance student learning and engagement.

It will reinvent the online learning space in the years to come. Through AI, student learning abilities will be estimated, which in turn will help us to bring modifications in the learning process.

But the biggest challenge in implementing these evolved technologies in the education is the internet penetration especially in tier II and tier III cities. These technologies have to be affordable so that underprivileged students can also have an access to them.

BLENDED LEARNING

With the onset of new strain of muted coronavirus, looks like the first few months of 2021 would follow the new normal. In such a scenario, blended learning will play a significant role for education sector.

For the past few years, blended learning has been a part of premier higher education institutes such as IIMs and IITs.

This form of learning combines online educational materials and opportunities for online interaction with traditional place-based classroom methods. Since some courses involve practical classes, blended learning is effective for such studies. It helps in enhancing the access to education and maximises flexibility to both students and teachers. This kind of learning process initiates student interest, interaction and satisfaction in the learning environment. Blended learning is no doubt the future of global learning.

The writer is Vice-Chancellor, JK Lakshmiipat University, Jaipur

Revolutionary change in education

According to a writer in the *Popular Science siftings*, the time-honoured entrance examinations to the various educational institutions are now being dispensed with in the United States, substituting in their place tests based on the principle of mental alertness. This revolutionary change, forms the climax of more than a decade of research and experiment on the part of psychologists. And far from affecting the standard and efficiency of selection, the new test, we are assured by Prof. Robert G. Skerret, is calculated to eliminate many applicants, who are now able to gain admission by means by what he calls an 'academic camouflage,' and pick out the promising intellectual sheep from the unimprovable goats. And the question as to how the new method will fulfil the functions of the orthodox written examination, the Professor answers by saying that the volume and variety of an aspirant-student's knowledge is not so important as his grasp of the basic principles involved, and his ability to apply these logically and quickly. The several tests devised to judge this capacity in the student comprise oral problems, to test ingenuity, to be answered without the use of pen and paper, the repetition of series of digits in normal and reverse order to test attentiveness and memory, moralisation from simple fables read out to the student, and many others.

भारतीय भाषाओं का सेतु

राजकुमार भारद्वाज

भारत में भाषाओं के विकास के लिए बड़े-बड़े काम करने की बात तो हमेशा होती रही, लेकिन आश्चर्यजनक है कि देश में भाषाओं से संबंधित दर्जनों विभाग, विश्वविद्यालय और संस्थान होने के बावजूद संस्कृत की स्थिति दयनीय बनी हुई है। इसी तरह कई संस्थानों और हिंदी विश्वविद्यालयों का अस्तित्व राष्ट्रभाषा हिंदी को भी आज तक उसका उचित सम्मान नहीं दिला सका।

शिक्षा मंत्रालय और केंद्र सरकार ने भारतीय भाषा विश्वविद्यालय की स्थापना करने का निर्णय लिया है। इस तरह के विश्वविद्यालय की स्थापना का संकल्प फलीभूत होने पर दूरगामी परिणाम आएंगे। सरकार के इस निर्णय से संस्कृत सहित कन्नड़, उड़िया, तमिल, असमी जैसी दर्जनों भारतीय भाषाओं का मान स्थापित होगा। इन क्षेत्रीय भाषाओं के ज्ञान का अनुवाद होगा और देश ही नहीं, संपूर्ण मानवता, विशेष रूप से नई पीढ़ी को साहित्य और गवेषणाओं का भरपूर लाभ मिलेगा।

भारतीय भाषा विश्वविद्यालय भारत के विलुप्त ज्ञान के शोध और क्षेत्रीय भाषाओं के लिए संजीवनी का काम करेगा। यह आंचलिक भाषाओं का सेतु बनेगा। इससे भावी पीढ़ी को ज्ञान-विज्ञान, समाज शास्त्र, राजनीति शास्त्र और अर्थशास्त्र आदि की पुस्तकें अपनी मातृ भाषा में उपलब्ध हो सकेंगी और वह उन विषयों के ज्ञान को आसानी से आत्मसात कर लेगी। पश्चिम बंगाल में एक परंपरा है कि बांग्ला का विद्वान किसी भी भाषा में लिखे, लेकिन बांग्ला में अवश्य लिखेगा। यह परंपरा अन्य भाषाओं के समृद्ध होने पर अन्य क्षेत्रों में भी दिखेगी। इससे सभी भाषाओं के विद्वानों और उसके

छात्रों का स्वाभिमान जगेगा। अंग्रेजी के प्रति अनावश्यक मोह का भाव कम होगा। हमें एक साथ सब भाषाओं में सभी प्रकार के ग्रंथों को पढ़ने और ज्ञान के विस्तार का मौका मिलेगा। संस्कृत के साथ तेलुगु, तमिल, उड़िया, कन्नड़ और मलयालम जैसी शास्त्रीय भाषाओं का उत्तरोत्तर विकास होगा, उनका स्वरूप निखरेगा और इन भाषाओं में हुए अदभुत और गहन अध्ययन का संपूर्ण मानवता को लाभ मिलेगा। मातृभाषा में ही व्यक्ति ज्ञान को आसानी से व्यवहार और संस्कार में ला सकता है। वर्ष 2013 में हुए भारत के लोक भाषा सर्वेक्षण के अनुसार देश में सात सौ अस्सी भाषाएं हैं। चिंताजनक बात यह है कि इनमें से एक सौ सत्तानबे लुप्त होने के कगार पर हैं और दो सौ बीस भाषाएं लुप्त हो चुकी हैं। भारत में भाषाओं के

विकास के लिए बड़े-बड़े काम करने की बात तो हमेशा कही जाती रही, लेकिन आश्चर्यजनक है कि देश में भाषाओं से संबंधित दर्जनों विभाग, विश्वविद्यालय और संस्थान होने के बावजूद संस्कृत की स्थिति बहुत दयनीय बनी हुई है। इसी तरह कई संस्थानों और हिंदी विश्वविद्यालयों का अस्तित्व राष्ट्रभाषा हिंदी को भी आज तक उसका उचित सम्मान नहीं दिला सका। देश के दो दर्जन केंद्रीय विश्वविद्यालयों में से केवल एक धर्मशाला विश्वविद्यालय में ही सारे विषयों की पढ़ाई हिंदी में कराने की पहल हो पाई है और इसका हिंदी भाषी हिमाचल प्रदेश के छात्रों को स्पष्ट लाभ भी मिल रहा है। वर्ष 2011 की जनगणना में सामने आया कि भाषा मानक के स्तर पर केवल एक हजार तीन सौ दसहतर भाषाएं ही खरी उतरीं और इनमें से एक सौ इक्कीस भाषाएं ऐसी हैं, जिनके बोलने वालों की संख्या महज लगभग दस हजार है।

विचार का क्रम और प्रक्रिया सहज रूप से अपनी मातृ भाषा में ही प्रकट होती है। अपनी भाषा में ही रचनात्मकता पैदा होती है। ऐसे में इस भारतीय भाषा विश्वविद्यालय में अनुवाद की भूमिका सबसे महत्वपूर्ण होगी। यांत्रिकी, चिकित्सा और प्रबंधन जैसे विषयों की पुस्तकें भारतीय भाषाओं में अनुद्दिष्ट होंगी, तो स्थानीय भाषाओं का खाद-पानी भी उठे मिलेगा। हमें यह हमेशा स्मरण रखना चाहिए कि नागार्जुन, चाणक्य, चरक, सुश्रुत, वाग्भट्ट सब तक्षशिला से संस्कृत पढ़ कर ही अपने-अपने विषयों के प्रामाणिक विद्वान बने थे। ऐसे में संस्कृत को केवल एक भाषा मान लेना बड़ी भूल होगी। इसी प्रकार से मातृ भाषाओं का भी व्यापक महत्व

है। संस्कृत में अर्थ तंत्र, राजतंत्र, सैन्य तंत्र, नीति, कूटनीति, विदेश नीति सब कुछ है। केंद्रीय साहित्य अकादमी के पास बाईस भाषाओं के विभाग और ग्रंथ हैं। राष्ट्रीय संस्कृत संस्थान, केंद्रीय हिंदी संस्थान, राष्ट्रीय संस्कृत संस्थान, केंद्रीय भाषा संस्थान, वैज्ञानिक और तकनीकी शब्दावली केंद्र, केंद्रीय हिंदी निदेशालय, तीन केंद्रीय संस्कृत विश्वविद्यालय, राष्ट्रीय सिंधी संवर्धन संस्थान और एक केंद्रीय हिंदी विश्वविद्यालय है। सभी राज्यों में उनकी स्थानीय भाषाओं की अकादमियां भी हैं। कई राज्यों में संस्कृत विश्वविद्यालय हैं। इन सबकी सामूहिक शक्ति देश की सभी भाषाओं के स्वास्थ्य को पुष्ट करेगी और मृत भाषाएं अपने योगदान के अनुवाद के कारण पुनर्जीवित होंगी।

भाषाएं जोड़ने का काम करती हैं। देश में और यहां



तक कि विदेश में ज्ञान-विज्ञान, समाज, धर्म और राजनीति के क्षेत्र में जो कुछ अपने लिए उपयोगी हो रहा है, चाहे शोध हो या नया-पुराना उपयोगी काम, उसका अनुवाद होना ही चाहिए। नव शास्त्रीय और पूर्ण शास्त्रीय पुस्तकों का अनुवाद हर हाल में होना चाहिए। पिछले दिनों एक राज्य के न्यायालय ने विद्यालयों में पठन-पाठन में अंग्रेजी भाषा के प्रयोग को लेकर टिप्पणी की, 'राज्य मातृ भाषा परिभाषित नहीं कर सकता।' इसको लेकर अकादमिक क्षेत्रों में तीव्र प्रतिक्रिया हुई थी। देश के दूसरे राष्ट्रपति सर्वपल्ली डॉ. राधाकृष्णन ने कहा था, 'भारतीय साहित्य एक है, यद्यपि वह अलग-अलग भाषाओं में लिखा जा रहा है।' भर्तृहरि ने एक हजार वर्ष पूर्व कहा था, 'मातृ भाषा में ही मूल विचार आता है और स्वाभाविक विकास होता है।' मातृ भाषा से हम अगर विच्छेदन करते हैं, तो हम संस्कृति से विच्छेदित होते हैं। भाषा एक विषय नहीं थी,

यह व्यक्ति विकास के समग्र स्वरूप का सबसे महत्वपूर्ण अंग थी। यह सर्वमान्य तथ्य है कि बहुभाषाओं का ज्ञान अधिक विद्वान होता है। फिर भारतीय भाषाओं का आपस में कहीं संघर्ष नहीं है, जो यह बात कहते हैं उन्हें समझना चाहिए कि भारतीय भाषाओं का संघर्ष तो अंग्रेजी से है। ऐसे में हमें भारतीय भाषाओं को वैश्विक भाषाएं बनाने का प्रयास करना चाहिए। भारत तेजी से विश्व पटल पर आगे आ रहा है। इसमें भाषाओं का सबसे अधिक योगदान है। भारत से बाहर विश्व के एक सौ तेरह विश्वविद्यालयों में हिंदी और दर्जनों विश्वविद्यालयों में पंजाबी, मलयालम, बांग्ला, तेलुगु, तमिल आदि भाषाएं पढ़ाई जाती हैं। अनेक देशों में संस्कृत भाषा और संस्कृत में गणित, अर्थ तंत्र, राजतंत्र, कूटनीति और अंतरिक्ष विज्ञान आदि पर शोध हो रहे हैं। भारत में गत सौ वर्षों से अधिक समय में नवाचार इसलिए नहीं हुआ क्योंकि हम विज्ञान, गणित, प्रबंधन की शिक्षा विदेशी भाषा में सीख रहे हैं। वस्तुतः नवाचार का विचार मूल रूप मातृ भाषा में आता है और उसी में उसका विकास होता है। हमें इस बात पर एकमत होने की जरूरत है कि सब भारतीय भाषाओं को उनके उत्थान के लिए उन सबकी पोषक संस्कृत के गर्भनाल से जोड़ना होगा।

भारतीय भाषा विश्वविद्यालय बनाने की सोच के पीछे भारतीय संविधान की मूल भावना थी। भारतीय संविधान के अनुच्छेद-343 से लेकर 351 तक भाषाओं के बारे में विस्तृत रूप में कहा गया है। इसका समीक्षा बनाते समय अनुच्छेद-343 व 351 पर स्मृति ने खासा विमर्श किया था। भारतीय भाषा विश्वविद्यालय में संस्कृत महाकाव्य में महाभारत, रघुवंश, रामायण, पद्मगुप्त, महिकाव्य सहित ज्योतिष विज्ञान, परमाणु शास्त्र, शुल्ब सूत्र, ग्रां सूत्र, सिद्धांतशिवोर्माणि, चरक संहिता, सुश्रुत संहिता और चाणक्य का नीति एवं अर्थशास्त्र आदि महान ग्रंथों, पांडुरलिपियों, साहित्य और ज्ञान-सागर का पुनः मंथन किया जा सकेगा। हमें आशा करनी चाहिए कि भारतीय भाषा विश्वविद्यालय भारत को पुनः विश्व गुरु बनाने का मार्ग प्रशस्त करने में सहयोगी साबित होगा। आज देश में कई बड़े गैर सरकारी सामाजिक, शैक्षिक, सांस्कृतिक संगठन हैं, जो इस काम को गति देने और प्रचार-प्रसार में सहयोग दे सकते हैं। सरकार को सांस्कृतिक एकता, समरसता और राष्ट्र गौरव के काम को बढ़ाने के लिए ऐसे विश्वविद्यालय को पूर्ण स्वायत्ता देनी चाहिए, तभी यह वास्तव की कसौटी पर खरा उतर पाएगा।

Pandemic in academics

One would recall that sometime around the third week of February this year, the 'quintessential scare' of COVID-19 outbreak had again grabbed headlines. But this scare came with a twist. For a change, educational institutions were now the new epicentres of COVID-19, rather than communities, localities or even offices. In fact, a few of the city's prominent schools were reported to have had COVID-19 affected staff as well as students among them, though a major part of the brouhaha might as well have been a case of exaggeration – at least to an extent.

Dwelling further on this debate, a few faculty members from various educational institutes had their own take on this: Sourav Baidya, a faculty of Economics

at Level Up Digital Academy, was forthright in his views: "I believe that education is an ongoing process. The system of education needs to be updated so that the fear of transmission (of the virus) might get reduced, along with any other (future) viral or transmissible diseases." Sourav signs off on an upbeat note: "Education is a process to achieve success in a systematic way." Biswajit Chakravarty, a faculty of Chemistry at Adarsh Academy, has a pragmatic take on the issue: "The pandemic situation has mostly been a curse for everyone and the teaching-learning



process has been affected to a large extent. It has been a challenge for the teaching fraternity as well as students. In urban areas, we have somehow learnt to cope with the situation with online classes, though I feel it can't be as effective as (physical) classroom teaching. However, we need to keep in mind that this pandemic will be a part and parcel of our lives for some time to come. Keeping in mind this bitter truth, the need of the hour, therefore, is to make technology more effective in the teaching-learning process, so that we can tackle any untoward (pandemic-like) situation head-on."

Dr Saumyajit Sengupta, a faculty of Physics at Don Bosco School, Pankazar, Guwahati, has put forward some novel suggestions: "Our educational institutions should be prepared to face this pandemic situation and tackle any kind of emergency. Firstly, proper maintenance of social distancing as much as possible is extremely important. Compulsory use of masks and hand sanitisers in school is another important protocol that has to be followed by everyone, including students, teaching as well as non-teaching staff. Proper sanitisation of the school premises before and after the classes is also extremely important. It is definitely possible with proper coordination between the school management, teachers, parents and students, and without creating unnecessary hype and panic."

All said and done, from the government's standpoint, the elephant in the room would be to show any leniency, in spite of a fall in the number of COVID positive patients. The realm of academics, it seems, has also learnt to adjust with the pandemic and as the online mode of education gradually switches over to the traditional offline (physical classroom teaching) mode, the student fraternity, along with their parents, have learnt to trudge along and live with the now and then pandemic scare:

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FIRST COLUMN**HARASSMENT OF NUNS MUST STOP**

The nuns sacrifice their whole lives in the service of society and want nothing in return



MARKANDEY KATJU

The recent incident of harassment of nuns from Kerala in Jhansi by the Right-wing goons needs to be unequivocally condemned as it brings disgrace to our country. Nuns are no ordinary women and they render great service to society, particularly in the fields of education and healthcare. Some of the best convent schools in India are run and managed by these sisters and almost everyone wants his or her daughter or other female relative to get admission in these missionary schools. Further, the hospitals they run are also par excellence.

The nuns sacrifice their whole lives in the service of society and want nothing in return for their selfless devotion. They live a disciplined life and serve people without any discrimination. They are deprived of the pleasures and happiness which most women have — a family, a husband and children. And yet many people levy all kinds of false and baseless allegations on these nuns, some of which are better left unsaid. One of the allegations that they do forcible conversions is patently false.



When I was a lawyer, and later a judge at the Allahabad High Court, the nuns of St Mary's Convent who run the best girls school in the town, would often come to me for help. I have always helped them *pro bono*. Their biggest harassment would begin a month or two before school admissions kick-starts in March as the school session started in April. Often they were harassed by the authorities and officials, who wanted to secure a seat for their daughters or other female relatives in the school.

The harassment was a way to create pressure as the seats in the prestigious school were limited and for every seat there would be at least 10 or 20 aspirants. In such a situation, a competitive test was imperative and was organised to select the candidates. However, in case any official's daughter failed to get through the entrance test, she would harass the nuns and create pressure. I remember how the municipal authorities once sent a notice to the Principal, Sister Evelyn, alleging that the land on which the school stood had been illegally occupied, which of course was totally false. On another occasion, an Income Tax notice was sent by an Income Tax official whose daughter had not been able to beat the competition. Also, police officials would often harass them and since the nuns were defenceless, they had often to succumb to such pressures.

Apart from the harassment by the authorities and officials, the nuns were also faced with the goonda-type student leaders of the Allahabad University, who pressure them for giving admission to their candidates. After I became a judge of the Allahabad High Court in 1991 whenever the nuns had a problem they came to me for help and I would call the District Magistrate or other authority and tell him that the harassment must stop. The result was that the nuns started regarding me as their elder brother, and they would sometimes invite me over for tea. I still remember the excellent cakes they would themselves prepare for me.

In my opinion, the nuns are our role models and if our nation has to progress, our people must develop the spirit of service and sacrifice which the nuns have. Far from harassing them, we must give them the highest respect and learn from them.

(The writer is a former judge of the Supreme Court of India. The views expressed are personal.)

Nearly 30 Years After A 50% Ceiling Was Imposed On Total Reservations, SC Is Considering The Issue Afresh. Is It Time To Lift The Cap Or Not?

Quotas cannot be reduced to a math formula. Leave decision to the states

Crossing the current 50% ceiling may eventually leave us with 100% quotas



Justice (Retd) D Hariparanthaman FOR

Nowhere does the Constitution prescribe a 50% ceiling on quota. Yet in 1962, a five-judge bench of the Supreme Court in the M R Balaji vs State of Mysore case laid down that reservation should be less than 50%. However, in 1975, another five-judge

bench of the Supreme Court in the State of Kerala vs NM Thomas case, considering all the decisions relating to the 50% ceiling, concluded that the percentage of reservation would be incumbent on facts and circumstances of each case and no hard and fast rule could be laid down. The quota matter cannot be reduced to a mathematical formula so as to be adhered to in all cases uniformly.

In fact, the Supreme Court gave an illustration that if a state government provides 80% reservation based on the population of backward classes in that state being 80%, the policy cannot be faulted with. As per the judgment, the dominant object of reservation is to take steps to make inadequate representation adequate for backward classes in public employment and education.

But, SEBCs were not identified by many state governments as well as the central government under Article 340 of the Constitution, thereby denying them reservation. It was only in 1990 that reservation of 27% to SEBCs was provided by the V P Singh government in central government employment by implementing Mandal Commission recommendations.

There is no blanket ban with respect to the percentage of reservation in the Mandal judgment, as in the 1962 judgment referred to above. However, it took about two more decades for the central government to provide 27% reservation in education to SEBCs. Still, many state governments in North India have not provided reservation to SEBCs in education and public employment.

The constitutional goal can be achieved only if the SEBCs, SCs and STs occupy the higher echelons of service and not the lower services alone. Justice Chinnappa Reddy of the Supreme Court expressed his view in Vasanth Kumar's case in the following words:

"Why not ask ourselves why 35 years after Independence, the position of the



FORWARD VERSUS BACKWARD: Reservation, a hot-button issue in the country, continues to bring people out on the streets

Scheduled Castes, etc. has not greatly improved? Is it not a legitimate question to ask whether things might have been different, had the District Administrator and the State and Central Bureaucrats been drawn in larger numbers from these classes?"

Now, even after 75 years of Independence there is no improvement in the situ-

ation, since there are not many judges from the SEBC, SCs and STs in high courts and the Supreme Court. There is almost nil representation for reserved categories among the executives/secretaries in the Central Secretariat where policies are decided, in IITs and IIMs and in Public Sector Undertakings. It is time the judiciary-invented 50% cap is done away with, leaving the responsibility to the governments, as clarified in the NM Thomas case of 1975.

The author is a retired judge of Madras High Court

Of the reasons to oppose the proposed stretching of all quotas in government jobs and in seats in colleges beyond the current 50% ceiling, some are fairly trivial. For example, one argument is that the measure (now a question before the apex court) may be contrary to what our Constitution makers envisaged while another sees it as reek-

ing of vote-bank politics.

We find the provisions for reservations in favour of the Scheduled Castes and the Scheduled Tribes (SC/STs) in articles 330, 332 and 335 of the Constitution

of India. While the first two articles stipulate quotas in the legislature, article 335 deals with job quotas. Nowhere else does one find any provisions of reservations for any other group(s). At present all quotas for groups other than the SC/STs are granted as exceptions to the fundamental right to equality. The governments are not even bothered to amend the article 335 to

add new groups, as it would expose the bankruptcy at not thinking through the whole matter.

Parliament has the power to add new provisions to the Constitution and the Supreme Court through judicial review can uphold a law constitutional. Therefore, legal or constitutional arguments against crossing the 50% mark do not hold water, though they are sound and logical. While upholding the OBC reservations in 1992, the court in a way lifted the floodgates halfway, and now it is set to determine whether any more lifting is warranted.

As for the insinuation of vote-bank politics, that's how democracy works.

However, the outrage against the matter is this: For decades we have been witnessing the arguments that certain groups deserve reservations as they are as poor and as deprived as the SC/STs. Now it is formal and constitutional that the OBCs are identical to the SC/STs. So, the implication is that while in 1950, a fourth of India's population (SC/STs) was very poor and discriminated against enough to grant them reservations, in 2021 anywhere around two-thirds of India's population are indeed the SC/STs!

How have we managed this stupendous accomplishment? By amending the Constitution!

It is a welcome development that a constitution bench is looking into the matter in a comprehensive way. The big picture starts with the Constitution (102 amendment) Act of 2018 which established the National Commission for the Backwards Classes (NCBC). Parliament copy-pasted the article 338 to create article 338 (B).

Article 338 created the National Commission for the SC/STs. In the early 2000s, this article was duplicated as article 338 (A) to create a separate commission for the STs. The move did not attract much attention as the SC/STs are identical in several respects. Therefore, articles 338 for the SCs and 338 (A) for the STs neatly fit into our constitutional scheme as well as our moral imagination.

But the trouble comes with another replica of article 338 as article 338 (B).



D Shyam Babu AGAINST

We are bound to hear arguments in favour of increasing quotas above 50% that groups such as Marathas, Patidars, Jats, etc are not just poor but they are similar to the SC/STs, nay they are also the SC/STs but called the OBCs. That seven decades of democratic governance has not only increased the number of poor people but rendered many of them similar to the SC/STs is an unconscionable twisting of the reality.

Beneath the surface of demands and arguments for more quotas is the sentiment that each group deserves its share of resources, and that share ought to be proportionate to its numbers. It may sound reasonable and be consistent with the logic of democracy. But, given that India stands finely sliced into thousands of sub-castes, proportionate social justice will result in more litigation, demands for quotas from every other group, and what have you. The real question, therefore, is not whether to cross the 50% ceiling, but whether to have 100% quotas.

As Harvard philosopher Michael Sandel suggests, a lottery to select candidates for college admissions and public employment could be a better way of ending elitism

Recently, Michael J Sandel of Harvard University has revived, in his book, *The Tyranny of Merit*, an old idea on how the lottery could be a better way of selecting successful candidates for college admissions. Instead of drawing the merit list of a few hundred out of thousands of applicants, a simple system could be worked out by first eliminating the bottom one-tenth or one-fourth who are found to be unfit, and then selecting the winners through lottery. India's governance failures have created both the victims and the fake winners. The mere accident of one's birth determines whether one would be a winner or a loser. We need a system that will neither punish the victims nor reward the winners. Lottery to select candidates for college admissions and public employment could be that system, not increasing the quotas.

The writer is senior fellow, Centre for Policy Research, Delhi



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Reserved categories hardly get any representation among executives/secretaries in the Central Secretariat where policies are decided, or in IITs/ IIMs and PSUs

in the medieval ages, most of the Kshatriyas and Vysias have descended to the position of Sudras".

Thus, the backward classes, who are deprived of education and excluded from administration, constitute a big majority among the Hindus. The debate on the reservation and the percentage thereon shall be made, taking into account this historical background.

While Article 16 (4) of the Constitution has provided reservation in public employment to backward classes, unfortunately the Constitution originally enacted did not provide for reservation in education. This led to insertion of Article 15(4) by way of the very first amendment to the Constitution extending reservation to education.

Reservation to backward classes has faced various hurdles caused by the dominant castes. One such hurdle is an attempt to fix a ceiling of 50% on the quantum reservation.

PAPER TRAIL

It is getting predictable — the intellectual, ethical and professional surrender of various institutions to the agenda of the party in power at the Centre. The University Grants Commission has produced a draft syllabus for the undergraduate history course. Echoing the ruling regime's drive for control in all spheres, the UGC has, for the first time, graduated from issuing general guidelines to producing a paper-by-paper course. The changes in the history syllabus of Delhi University cause little surprise. Mythological concepts and ancient Indian texts with a religious slant — non-religious texts do not make the cut — have been given primacy over the study of pre-historic times and the early historic period. Together with these has been included the 'idea of Bharat' with one topic suggesting that it is 'eternal'. What does fantasizing have to do with history? That this should be matched with a sidelining of lessons on the Mughal period — apparently caused by Babar's 'invasion', a term rejected hitherto by the university — is hardly unexpected. Hindu and Muslim societies are to be studied under separate heads, suggesting division, not interaction, in the medieval period. These changes are enough to indicate that history teaching is to be turned on its head; the rest, such as using V.D. Savarkar's label for the 1857 uprising while ignoring other rebellions, pretending there was no Dalit politics till 1950 or no partition of Bengal in 1905 and no resistance to it, or replacing books such as Irfan Habib's with books by allegedly 'pro-sangh' writers, are just dangerous details.

The intention is to disseminate ignorance. This is not the ignorance of not knowing, but that of belief in something false or non-existent. An example is the draft syllabus's highly original identification of an Indus-Saraswati civilization when no one knows if the ancient Saraswati river existed. But juggling priorities and topics, or introducing un-historical ideas, is not meant just to distort understanding. Fantasy replacing facts and disguised propaganda replacing historical accounts are evidence of a far-sighted goal. The UGC seems desirous of compelling students to dismantle their intellectual equipment which they will strengthen with study, analysis, independent reflection and research. The programme is to create brainlessness. Without that, it will not be possible to establish one dominant ideology and undisputed political control. Students are filling up the jails.

Students attending online class in the Capital; a mother helping her daughter with virtual learning. **ASHISH KUMAR VERMA AND R.V. MOORTHY**



SHINJINI GHOSH
(JAIDEEP DEO BHAN)
KARUN KUMAR

As COVID-19 cases continue to rise in the city after a two-month remission, the hope that students had nurtured of returning to classrooms has been dashed. With online classes continuing to play the role of the substitute, students from across age groups have started to feel the loss.

Patchy internet connectivity, missed internship or extra-curricular opportunities, lack of "school or college life" and navigating through home to find a place conducive for study are some of the issues students pointed out while looking back at the past year when classes went virtual.

For Harshul Singh, a second-year Political Science (Hons) student, studying in DU had always been an aspiration. However, before he could even complete his first year in the university, he was forced to return to Saharanpur in Uttar Pradesh, his native place, due to the pandemic and the subsequent lockdown.

Problems aplenty

"I have always had the aspiration to be in Delhi University and a part of the intellectual community. While the lockdown has been an introspective one, things were not convenient. Sitting behind a screen with poor connectivity and in an environment not conducive to attending classes was not easy. The lack of access to libraries was an added issue. Overall, in the past year we have missed out on the essence of being a part of DU," said Mr. Singh.

Talking about the difference in the quality of learning, Ramjas College student Sneha Saxena said: "The quality of online class-

BRIDGING THE GAP

A year has passed since virtual learning became commonplace. While students say they miss the essence of campus life and are faced with technical glitches, EdTech companies are launching innovative products and are pushing for a blend of online and offline learning in higher education

es can never match that of physical classrooms. There were network issues due to which we even had to change the format of our mid-term examinations. Even though professors tried to help, the lack of proper discussions in class was a big disadvantage," she said.

"Finding a place at home to attend these online classes was also an issue. I have two other siblings and initially we did not have enough devices for all three of us to attend classes simultaneously," added Ms. Saxena, a native of Uttar Pradesh's Ghazipur district.

At the school level, the number of hours spent in front of the screen as well as lack of continuous supervision by an adult has led to its own set of problems. Geeta Bisht, who bought a smartphone for her son to attend online classes, says that she was shocked during a parent teacher interaction when told that her son had not been attending class-

es. "Once I went back to my job, I would leave my son at home with the phone unsupervised. He was busy playing games and chatting with friends. I feel that he has lost out completely on a year. At first we took it as a positive that we can spend time as a family. But now, online class is no substitute," Ms. Bisht said.

Missing campus life

Although online classes can tick the boxes of having finished covering the syllabus, students studying at premier schools or colleges feel they have missed out on the "experience" of studying at an institution that is irreplaceable. Navya Jain, a student of Indraprastha College for Women, lamented: "What I have missed the most in the last one year is the college experience that one looks forward to. Online classes are not as interactive as regular classes as most of the times people have their videos off and it is not the same."

Several students also spoke about the "lack of connect" to professors, fellow classmates and the courses.

Veerangana Chauhan, a student of Political Science in Lady Shri Ram College for Women, said: "It feels like I am not being able to do anything properly these days. The most important factor is lack of connect with whatever I am trying to pursue. There are 80 people in our class and often with online teaching, professors are not able to devote individual time to all. These days even if there are tutorials scheduled, I am more concerned about saving data for the classes. Attending classes from home was another challenge as distractions were aplenty with family members around."

Lack of internships was another drawback. "When I started college, I was looking forward to an overall experience including opportunities to get good internships. Under current circumstances, the scope for

such opportunities is no longer possible. I was a part of the debating society among others most of which I have had to let go now," said Ms. Chauhan.

Lack of discussions inside and outside classrooms have affected the teaching-learning process over the past year, according to professors. Tanvir Aejaz, professor at Ramjas College, said: "Initially the feeling was that this is going to last momentarily and that we will all be back soon. But at this point, teachers are worried and frustrated. The vibrant discussions in classrooms are missing in online classes. It has become more like someone giving sermons. Usually most of the learning is done outside classrooms, which is no longer an option now."

Teachers' apprehension

Teachers have other doubts too. "In the backdrop of the New Education Policy (NEP) there is also apprehension among teachers that the government is pushing for online classes. Any policy which is top-down will have its repercussions if the primary stakeholders are not taken into account," said Mr. Aejaz.

While at the school level, parents have been sceptical about sending their students back to school due to the virus, at the university level, student groups have been demanding the reopening of colleges at the earliest. Students feel that the digital divide has created a gap

that will be very difficult to bridge as students are not allowed on campus immediately.

The Students' Federation of India along with other organisations that held a protest and hunger strike to demand reopening of campuses earlier this month said: "Students want campuses to reopen. There are so many infrastructural facilities, libraries and laboratories that students are restricted from accessing, thus decreasing the quality of their educational experience. Many students relied on these easily available resources on their campuses and university areas but the prolonged lockdown has reduced their opportunities. It is very evidently exclusionary and against the interests of the student community."

Changing face

To help bridge the gap, EdTech companies have launched a number of innovative products to help create a favourable learning experience. When the lockdown happened, not many institutions were prepared to deal with shifting to online classes but as the year went along, solutions were found to leap over many of the hurdles.

Chandrabhanu Patta-Joshi, founder of Glossa-read, a platform that helps in making higher education more accessible and convenient, says that despite the challenging times, his company has seen an exponential growth in terms of expansion. "The Ed-Tech industry has undergone a sea change

with the shift towards online learning and greater adoption of technology tools. The lockdown has caused the transition from offline to online, especially for Indian education system at a much faster pace with classes, doubt-solving sessions, remedial and even assessments moving online," Mr. Patta-Joshi said.

He added that in a post-pandemic world, we will see a blend of online and offline learning in higher education. The industry believes that in the coming months and years, more students will prefer to study online and access content or study material online as it also addresses challenges such as expensive books, poor library infrastructure, multiple and fragmented sources of study material and the sheer amount of time one takes in gathering the relevant study material.

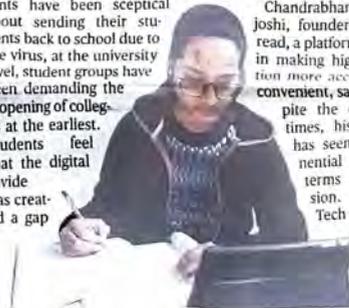
Sumeet Mehta, co-founder and CEO of LEAD, an EdTech company, observed that adoption of technology has been brought forward by a couple of years and that most schools undertook a 'jugaad' to set up online learning to make up for school shutdown.

However, he feels that going forward as the school reopens, there is a need to cover the learning gaps from last year and hence bridging courses are imperative. "Schools need to follow hybrid schooling which gives an option to switch between school modes [offline/online] and let the schools decide the days students will attend online class or physical school. Despite the challenging environment, we need to continuously add value and reinvent our learning models as we move away from the analogue world to the post-COVID world," Mr. Mehta said.

Virtual school

An indicator to the change the COVID-19 had brought to learning can be seen from the announcement made by the Delhi government during the budget that it plans to launch a Virtual Delhi Model School. Education Minister Manish Sisodia said that the school will be based on the principle of "anywhere living, anytime learning, anytime testing" and it will not have four walls or a building but they will be children, teachers, regular teaching-learning, examinations and assessments.

"It will be a unique experiment in itself, and will probably be the first virtual school in the world. This will benefit students in Delhi as well as all those children who live in any part of the country but want to benefit from the Delhi education model," Mr. Sisodia said.



29.3.2021

Getting Education to Get Smart



Ken Kang

country. 5G networks are around the corner, and they have the potential to transform the education sector, offering seamless remote-learning opportunities in every corner of the country. At the moment, it is a daunting task to ensure teaching quality is uniform across the country, especially in rural areas. 5G can bridge that gap by making streaming of high-quality interactive virtual classrooms and content a reality.

Second, students should be provided with high-quality devices at affordable prices to access these teaching aids through a special incentive policy for device manufacturers.

And, third, support and training of the teacher community will be

required to prepare education for the schools of tomorrow. This would involve training them on how to use digital pedagogies with technology products to enable more engaging learning approaches in the future.

The lockdown has resulted in the emergence of a variety of new jobs, the 'gig economy' and the likelihood that the careers of 2025 may not have even surfaced yet. The new educational and digital learning environment will require development of a novel syllabus and academic process. Today, dozens, if not hundreds, of books worth of information can be stored on computers or tablets.

The same devices can be used to design presentations, do course work and partake in group projects and classroom discussions. This translates to a need for enabling even the most underserved citizens in remote locations with modern methods of learning, new information and the tools that facilitate their exchange.

While this is a challenge in the short term, once built out, there is no reason why 1,000 or even 10,000 schools cannot come to study together at the same time with more children enrolled in the educational system than ever before. The point of that would be uniform education thanks to stable technology networks that offer a level playing field to one and all.

There is a huge scope for growth.

The National Sample Survey (NSS) data shows that only 12.5% of the households of students in India have internet access at home, with a sharp urban-rural divide — 27% have access in urban areas and only 5% in rural areas. Also, only one-third of households have some member with access to the internet. In fact, only half of the households with any access to internet own a computing device, smartphones included. This means everyone at home may not have access to the internet. The road to self-reliance is only just beginning as technology makes rapid strides towards the future.

The world of tomorrow will not just feature schools and colleges that have managed to harness the power of digital connectivity and knowledge-sharing. Internet of Things (IoT) has ensured that we will have the internet running through software in our devices at home, office and cars, and with the ability to communicate with each other.

Building out a robust network to support digital education does more than benefit those who provide education and services and products on it. Most of all, it empowers those on the receiving end, as it transforms their lives from the have-nots to the haves.

The writer is CEO-president, Samsung Southwest Asia

Schools have restarted in many parts of the country, bringing students back to classrooms after several months of attending classes online from their homes. We have all been waiting for this Better Normal.

The Better Normal has been aided by a massive and unexpected digital shift. Despite the challenges, students, teachers and parents, governments and education institutions put their best foot forward and collaborated in various ways. These included innovative ideas to connect students with their teachers, create study material and make them available digitally.

An entire generation of students did miss out on traditional brick-and-mortar classroom learning. But effective use of digital channels also showed us how we can use technology to give children access to quality education even in locations where it is difficult to set up physical schools.

The potential of unleashing a game-changer in education will rest on three pillars. The first is creation of high-speed networks across the



Getting all systems go

FILE PHOTO

■ SHAHNAAZ.KHAN

A teacher's role today, goes much beyond just disseminating knowledge. It is about nurturing young learners to be resilient, adaptive, innovative, empathetic and critical thinkers; all of which they need, to be successful in a fast evolving world. As teachers, it is our collective responsibility that we open their minds to not just 'what was', but to 'what can be' and 'what is my role in it'. The bubbles created by social media, and magnified by the pandemic, are mirrors to what an extremely polarised world may look like.

■ Creating classrooms where multiple perspectives are debated and discussed critically and reflectively is imperative towards nurturing 21st century global citizens. However, the question is how ready or equipped are we, to foster this environment? We need to introspect at every level and reflect on our teaching pedagogy. Our own learning process gives us an opportunity to implement methodologies to help the classrooms evolve as healthy spaces to collaborate, and express and respect different voices.

The Social Sciences provide an excellent space to engage in such discussions. The subject is able to unravel normative bin-

Space for discussion and debate

The Social Sciences can be an umbrella under which students can explore their lived experience and realities, not just in subject silos but as a cohesive whole

aries, while traversing in the grey zones of right and wrong. The teacher as facilitator of debates and discussions is pivotal to contextualise the text and provide conceptual clarity.

Understanding as reflection

This is the first step to untangle complex narratives and events. What is my stand on an issue, and why have I chosen said stand? Before understanding what makes others take conflicting perspectives, learners need to engage with what makes them hold on to theirs. Any issue of relevance to the learner can be picked up here – from the Partition to the on-

going farmer protests. Before debates and discussions with others, reflection provides learners with the opportunity to consolidate and comprehend their thoughts.

Developing a thinking classroom

Visible thinking routines are effective to get students to share how they feel and reflect, as well as give teachers a sense of the learning. Try to develop independent thinkers by nurturing a culture of creative thinking and encouraging students to have a voice in the classroom. Adopt a concept-based curriculum, a 21st century need in academics to develop inde-

pendent thinkers. This is a research-backed approach to teaching thinking dispositions, and has provided educators with a tool kit to develop a culture of thinking in the classroom. Students should be encouraged to discuss their take on an issue from multiple stakeholder perspectives, which can show that different people have different connections to the same thing that influence their stand.

Debate as discussion

It is a valuable skill to be able to both debate your 'opponent' and discuss your points of view. The Social Sciences as a curriculum are effective in provid-

ing a space where the learners engage with the human experience and condition as a laboratory in itself. The Socratic Method – using questions to probe values, principles and student beliefs – is a great tool to encourage classroom discourse. Inquiry, rather than facts and topics, drives the discussion. What is the value for a student in 21st century India in learning about the French Revolution? By conceptually unpeeling concepts and context, we understand governance as a system, change as a constant, and state legitimacy as a relationship. So, the student is able to relate these to democracy, dissent, and revolutions as they

see around them.

Contexts and connections

The Social Sciences can be that umbrella under which students can explore their lived experience and realities, not just in subject silos but as a cohesive whole. Learning more about ourselves and the world around can be enlivened by aligning it with other domains, and even using their concepts, knowledge and skills. The school, therefore, needs to evolve towards concept-based learning to give student voice priority, among other reforms. Connecting the threads of learning, debate and discussion can foster creative thinking beyond traditional Social Science topics.

Including such practices routinely in Social Science classrooms is possible for offline, online or hybrid learning. It is especially crucial given the effect the pandemic has had on education to keep students engaged and informed. Navigating critical issues of our times can seem daunting but, with careful thought and preparation, the teacher can nurture thought leaders and change makers of tomorrow, who are willing to engage with multiple ideas, identities and ideologies.

The writer is the Political Science teacher at Shiv Nadar School, NOIDA.



Fostering future entrepreneurs

Coping with challenges of the future require the right skill-sets and that involves developing entrepreneurial mindset early, says Mekin Maheshwari of the Udhyan Learning Foundation

■ MADHUMITHA SRINIVASAN

Today, as the focus of education shifts from academic learning to skill-building, developing an entrepreneurial mindset makes students job-ready and helps them address the challenges of the future. This is what the Udhyan Learning Foundation (ULF) has been working towards, through its programmes, Udhyan Shiksha (for students) and Udhyan Vyapar (for micro-entrepreneurs).

Launched in 2017, Udhyan Shiksha works on education reforms, co-created with state governments, to enable learning-by-doing. Focused on education modules that are more connected with real-world aspects while increasing learner autonomy among students, it has collaborated with the governments of Delhi, Haryana, Assam, Kerala, Maharashtra, and Karnataka. The Entrepreneurship Mindset Curriculum (EMC), designed specifically for students from Classes 9 to 12, is currently being implemented across 1,024 schools, in Delhi.

Mekin Maheshwari, Founder and CEO, Udhyan Learning Foundation, offers insights into the need for entrepreneurship at the school level and the various facets of the programme.

Need for entrepreneurship
Humanity is staring at complex social and environmental problems that require us to be more

empathetic, experimental, and collaborative. When entrepreneurial mindsets and skills are built, students are equipped to solve challenges.

Being entrepreneurial adds significant value to every student, irrespective of whether they go on to be a scientist, teacher, doctor, or business leader. Entrepreneurial people are able to solve more problems, operate with higher grit, try new things, and continuously understand and improve themselves. These mindsets, and the 21st-century skills that students learn, are what employers seek.

Building agency

Students learn various skills and mindsets through a set of structured activities and reflection questions. One of the mindsets is to develop self-awareness, and this is done in a fun and engaging manner to enable them to understand



Skill-building: Customers interacting with students at a business fair. (Left) Mekin Maheshwari.

themselves and each other. Every week, on one day, they take a break from teacher-facilitated activities and anchor a student-driven process in which they practise building communication skills through debates and Just-A-Minute talks. Interactions with other professionals and entrepreneurs also help them explore different

careers.

Then there are field projects, where students apply their learnings by running a small venture to create value in any domain that aligns with their strengths and purpose. Every learner receives seed money between ₹5,000 and ₹10,000 to run their own business for six weeks, and 91% is returned at the

end of the course. The shift in learners' attitudes towards risk-taking, collective problem-solving, and self-belief can be seen in this level.

During the pandemic

This past year, the focus has been to continue the engagement with the learners. Hence, social media and online

interventions have been used as implementation channels. For students who don't have Internet access, interactive worksheets have been developed. The activities in the curriculum have been re-imagined for a more independent context, to enable learners to experience them without any facilitation from the teachers. It has also opened up more opportunities for integrating real-life learning. For example, now, students can work on situations that are real for them and their immediate contexts, such as family and neighbourhood.

Anyone who is interested in conducting an entrepreneurial mindset programme can write to contact@udhyam.org for a copy of the curriculum, which is open-source.



The shift in learners' attitudes towards risk-taking, collective problem-solving, and self-belief can be seen in this level.

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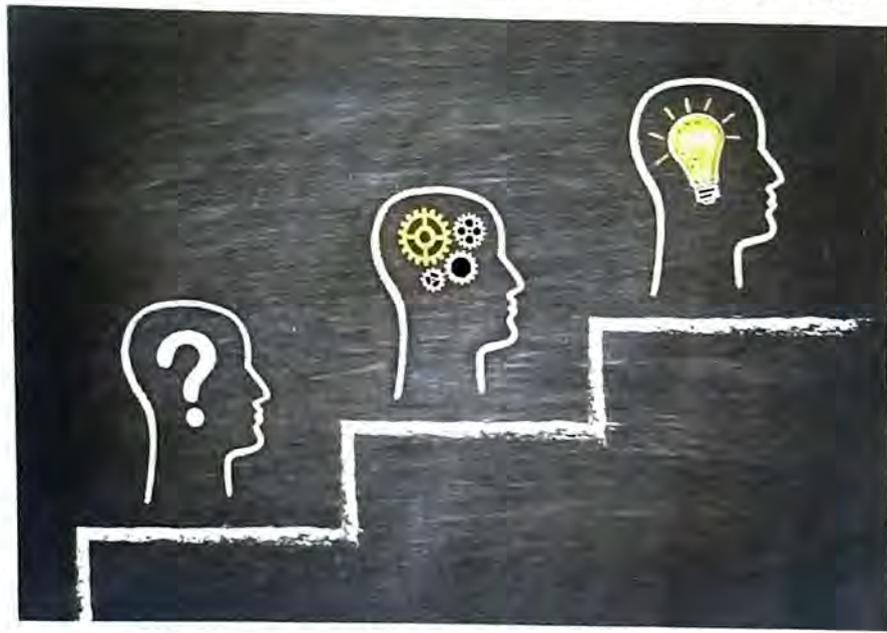
Experiential learning is a process that allows learners to develop knowledge and skills from their own experience rather than from formal courses, says CHARU NOHERIA

India's education segment is rapidly changing and online learning has become an indispensable part of it. All thanks to technological advancements, marking a new chapter for the sector in the post-Covid world. While other occupations struggled in 2020 due to the Covid-19 pandemic, educational start-ups and teachers found a common platform of e-learning to engage with learners. EdTech startups are mushrooming at a rapid pace to keep up with the demand in the market.

While work-from-home was not entirely a new concept in the pre-Covid days, school-from-home certainly is! Educational institutions were among the first to shut down and the country was faced with a serious predicament — academic discontinuity for millions of students. Enter, e-learning! The pandemic exponentially accelerated adoption of e-learning. Edtech companies that were agile, adapted quickly to the new circumstances and offer more than just online tutoring that existed before the pandemic struck.

With students sequestered at home due to social distancing norms and health concerns, educators had to find efficient and interesting ways to engage students. It became important for solution providers to design lessons to interest the curious learner to learn further, even during the pandemic-induced lockdown.

One reason edtech companies were able to allow students to gain access to best-in-class remote learning is technology. Internet proliferation and increased usage of smartphones has made elearning more accessible than ever, even to students



in Tier-II and Tier-III towns. Schools have shifted to online learning and teachers are encouraging students to adopt online learning methods since they are convenient and efficient. The future of education is now set to be student-centric rather than teacher-centric, with the advent and increased adoption of online learning tools.

Experiential learning: Experiential learning is a process that allows learners to develop knowledge and skills from their own experience rather than from formal courses. This is understandable. When you learn to ride a bicycle or to swim, you never forget because you learnt the skills practically. Similarly, when you watch

movies, you retain more - the concepts come to life before your eyes and ears — creating greater retention. How many of us have sat through boring classes and lost interest in subjects because of the traditional methods of teaching and learning? Experiential learning is, therefore, interactive, participative and multi-dimensional. It is only through experiential learning characteristics, when woven into the curriculum, that students will be better prepared to face the complexities of the modern world.

Edtech companies are facilitating live classes, automated attendance, personalised assignments, ready-to-

use presentations, adaptive practice and even instant doubt-clearing, making learning more convenient and efficient, and creating a unified learning solution. These advances in e-learning further help India make the transition to digital education from physical classrooms. And the big difference between the traditional ways and digital education is experiential learning. Hands-on learning, immersive storytelling, gamification, simulations and videos are the best way for students to absorb, retain and apply concepts.

Experiential learning is effective because it closely mimics real-world experiences, structures and monitors those experiences and provides ample opportunities for hands-on doing, experimenting and simulation. Using all these elements produces a powerful learning experience that cannot be replicated by other learning methods.

Today, the classrooms combined with digital learning tools through innovative methods have helped in increasing the student's engagement with personalised learning approach. Artificial intelligence and machine learning have become an integral part of the teaching process that allow students to learn with an understanding.

The writer is Co-Founder and COO, Practically

Donors And Academic Freedom

Given stormy seas in today's India, funding must be diversified beyond a few business sources

Swaminathan S Anklesaria Aiyar



Ashoka University's reputation as a world-class liberal arts university has been dented by Prof Pratap Bhanu Mehta: His media columns highly critical of the BJP proved very inconvenient for those running Ashoka. Former chief economic adviser Arvind Subramanian also resigned from the faculty, saying Ashoka could no longer protect academic freedom. Students went on strike, and 150 academics worldwide condemned Ashoka.

That is a tragedy, but the big issues of higher education go far beyond Ashoka or Mehta. Five years ago, I was with a group of journalists in Kolkata covering the last state election. At a meeting with top academics, they castigated CM Mamata Banerjee for destroying academic standards. They said not only seats in good colleges but also academic posts were being sold for cash, and critics were being victimised. Today's Ashoka controversy reminds me eerily of that episode.

Despite her high-handed tactics, Mamata won that election with a massive majority. Narendra Modi also won a massive majority in the 2019 general election despite a much-criticised crackdown on dissenting students at Jawaharlal Nehru University and Aligarh Muslim University, and arresting academic critics under laws on sedition and unlawful activities laws. When the electorate cares so little about freedom in universities, politicians are unlikely to change their increasingly illiberal attitude.

Many years ago, I participated in a World Bank course to improve academic and media analysis of state budgets. While the central budget was thoroughly and expertly discussed by the media and academics, state budgets were not. So, the Bank invited state university academics to write papers on their state's budget.

The quality of the papers and discussion that followed was abysmal. Why?



One state professor told me, "Our promotions and prospects depend entirely on our relations with top politicians and bureaucrats. It does not depend on our research papers or budget analysis. So why should we bother?" No wonder the quality of college education is so poor.

I had hoped that private sector, non-profit universities like Ashoka would establish global standards without sucking up to politicians. I was wrong.

Mehta says his resignation was forced by political pressure. Ashoka's founders deny this. But even if there was no overt pressure, businessmen and other donors fear antagonising the government, and will, without any political orders, distance themselves from institutions - universities, journals, TV channels, NGOs - connected with strident government critics.

Mehta was hired as an asset to Ashoka. But in recent years the trustees indicated to Mehta he had become a liability, that angry donors were with-

One state professor told me, "Our promotions and prospects depend entirely on our relations with top politicians and bureaucrats. It does not depend on our research papers or budget analysis. So why should we bother?" No wonder the quality of college education is so poor

holding donations. I think Mehta should have said, so what? He and Subramanian should have fought their battles within the university and dared the trustees to sack them.

That is now in the past. The bigger problem is the fate of universities who

till now viewed Ashoka as a model to emulate. This model is highly dependent on donors for the huge funding required to attract world-class faculty with world-class salaries, provide scholarships for 65% of students and expand fast.

This model carries the risk of sudden stops in donations. No one should be surprised that business donors want to distance themselves from a university whose best-known staff fulminate against the government in columns and TV appearances. Some donors are fervent Modi admirers. Others fear political retribution.

Such fears go back decades. When businessmen are asked to rate the budget on TV on budget day, virtually none rate it less than 8 out of 10, regardless of which party is in power. They know that an honest answer carries political risks. Speaking truth to power does not help. Sucking up does.

Those running Ashoka University are trying to salvage the situation. To re-establish a reputation for academic freedom, Ashoka is thinking of creating internal "firewalls" to check external pressures on the faculty; and an ombudsman to settle disputes.

But this will not solve the problem of donations drying up, leaving Ashoka without funds for staff, scholarships and ambitious expansion plans. The answer is to lessen dependence on business donors.

Having 15 business donors may look like diversification, but does not diversify outcomes: All 15 can stop donations simultaneously. The donor base should be expanded to non-business foundations, foreign donors, alumni donations and crowdfunding.

Reducing dependence on business donations also means cutting ambitions and costs. Cut salaries, reduce scholarships from 65% to say 40%, slash ambitious expansion plans. Use distance learning to cut costs. This may dismay Ashoka's founders, who wish to quickly establish an Indian version of Harvard or Oxford. But it needs a better model to navigate stormy seas in Indian conditions.

Uday Deb

रोजगार के सवाल का समाधान

विभिन्न प्रतियोगी परीक्षाओं के रद्द-स्थगित होने का सिलसिला थमने का नाम नहीं ले रहा है। पिछले महीने सेना को अपनी एक देशव्यापी भर्ती परीक्षा प्रश्नपत्र लीक होने के कारण रद्द करनी पड़ी। प्रश्नपत्र लीक होने अथवा अन्य किसी धांधली के कारण परीक्षा रद्द होने का यह इकलौता मामला नहीं। ऐसे मामले सामने आते ही रहते हैं। जब कोई भर्ती परीक्षा रद्द होती है तो लाखों छात्र प्रभावित होते हैं और नौकरी पाने की उनकी प्रतीक्षा भी बढ़ जाती है। जबसे कोविड महामारी फैली है, तबसे उसके कारण भी कई परीक्षाएं रद्द हुई हैं। हाल में महाराष्ट्र राज्य सेवा आयोग की परीक्षा पांचवीं बार स्थगित की गई। कोरोना के कारण ही हाल में मध्य प्रदेश पुलिस कांस्टेबल परीक्षा रद्द की गई। राजस्थान में अध्यापक पात्रता परीक्षा आर्थिक पिछड़ों को मौका देने के चलते स्थगित हुई। उत्तर प्रदेश में अधीनस्थ सेवा आयोग की परीक्षा परिणाम आने के बाद रद्द कर दी गई, क्योंकि जांच में यह सामने आया कि इस परीक्षा में गड़बड़ी हुई थी। इसी आयोग ने अप्रैल में होने वाली अपनी तीन और परीक्षाएं स्थगित कर दी हैं।

चंद दिनों पहले उत्तराखंड सरकार ने सहकारी बैंक भर्ती परीक्षा रद्द कर दी, क्योंकि उसमें धांधली के आरोप लगे थे। इसके पहले हरियाणा स्टाफ सेलेक्शन कमीशन की ओर से हुई ग्राम सचिव भर्ती परीक्षा को प्रश्न पत्र लीक होने के कारण रद्द करना पड़ा था। हिमाचल प्रदेश में हिमाचल पथ परिवहन निगम की कंडक्टर भर्ती का परीक्षा परिणाम अटक गया है, क्योंकि उसमें धांधली की जांच रपट का इंतजार किया जा रहा है। दिल्ली के जिला न्यायालयों में ग्रुप-सी की भर्ती परीक्षा भी स्थगन का शिकार हो चुकी है। परीक्षा स्थगन का कारण वही रहा-प्रश्न पत्र लीक होना। वास्तव में ऐसी भर्ती परीक्षाओं की गिनती करना मुश्किल है, जिन्हें प्रश्न पत्र लीक होने या अन्य किसी गड़बड़ी के कारण रद्द किया गया। इसमें संदेह नहीं कि रिक्त पड़े सरकारी पदों पर समय से भर्ती न हो पाने का एक कारण इस या उस वजह से रद्द या स्थगित की जाने वाली भर्ती परीक्षाएं भी हैं। रद्द, स्थगन, विलंब का शिकार भर्ती परीक्षाएं देर-सबेर आयोजित होंगी ही, लेकिन समस्या यह भी है कि सरकारी नौकरियों की संख्या घटती जा रही है। कोरोना संकट ने केंद्र के साथ राज्यों की आर्थिक



राजीव सचान

निजी क्षेत्र को लेकर की जा रही सस्ती राजनीति रोजगार के सवाल को और गंभीर ही बनाएगी



थम नहीं रहा भर्ती परीक्षाओं के टलने का सिलसिला • फाइल

हालत पर और बुरा असर डाला है। इसके चलते रिक्त पदों को भरने में और विलंब हो सकता है।

इसकी अनदेखी नहीं की जा सकती कि विभिन्न राज्यों में पुलिसकर्मियों के ही लाखों पद रिक्त हैं। यहां तक कि अर्द्धसैनिक बलों में भी एक लाख से अधिक पद रिक्त पड़े हुए हैं। सितंबर, 2020 के एक आंकड़े के अनुसार, देश भर में केवल शिक्षकों के ही दस लाख से अधिक पद रिक्त हैं। पुलिस और शिक्षकों के पदों के लंबे समय तक रिक्त बने रहने का कोई मतलब नहीं। इन्हें प्राथमिकता के आधार पर भरा जाना चाहिए। यह बात अन्य विभागों के रिक्त पदों को लेकर नहीं कही जा सकती, क्योंकि कामकाज में तकनीक का दखल बढ़ता जा रहा है। तकनीक और खासकर आर्टिफिशियल इंटेलीजेंस जैसी तकनीक का असर नौकरियों पर पड़ना तय है। सरकारी नौकरियों में कमी की भरपाई के लिए निजी क्षेत्र का सहयोग लेना आज की सख्त जरूरत है। इस जरूरत को पिछले दिनों प्रधानमंत्री नरेंद्र मोदी ने कई बार यह कहकर रेखांकित किया है कि सरकारों का काम उद्योग-धंधे चलाना नहीं है। निःसंदेह सरकारों का काम उद्योग-धंधे चलाना नहीं है, लेकिन उन्हें रोजगार के सवाल पर तो गंभीरता का परिचय देना

ही होगा। सरकारी नौकरियों में कमी की भरपाई निजी क्षेत्र कर सके, इसके लिए इस क्षेत्र को प्रोत्साहन दिया जाना चाहिए। यह काम बेहतर नियमन और निगरानी तंत्र बनाकर ही किया जाना चाहिए, ताकि न तो किसी तरह की मनमानी हो सके और न ही एकाधिकार वाली स्थिति पैदा हो। निजी क्षेत्र को प्रोत्साहन देने की बात पर आम तौर पर विपक्षी दल केवल नाक-भौं ही नहीं सिकोड़ते, बल्कि ऐसे आरोपों के साथ सामने आ जाते हैं कि सरकार सब कुछ बेचने पर आमादा है।

कांग्रेस केवल ऐसे आरोपों तक ही सीमित नहीं है कि मोदी सरकार अपने गहने बेचने में जुट गई है, बल्कि वह यह भी प्रचारित कर रही है कि मोदी सरकार केवल तीन-चार उद्योगपतियों के हितों को पूरा करने का काम कर रही है। वाम नेताओं की संगत में घोर वामपंथी बन चुके राहुल गांधी खास तौर पर अंबानी-अदाणी को निशाने पर रखते हैं। जब कोशिश इसकी होनी चाहिए कि देश में अंबानी-अदाणी सरीखे बड़े और लोगों को नौकरियों के साथ रोजगार के अवसर प्रदान करने वाले कारोबारी समूहों की संख्या बढ़े, तब उन्हें न केवल खलनायक बताया जा रहा है, बल्कि आधारहीन आरोपों के जरिये लाछित भी किया जा रहा है। क्या ये कारोबारी समूह अपने उत्पाद या फिर सेवाएं जबरन लोगों को मुहैया करा रहे हैं? क्या ऐसा कुछ है कि इन कारोबारी समूहों के उत्पाद अथवा सेवाएं घटिया होने के बावजूद लोगों को खरीदनी पड़ रही हैं? यह विडंबना ही है कि जो दल संकीर्ण राजनीतिक कारणों से कारोबारी समूहों को निशाना बनाकर निजी क्षेत्र पर नजला गिराते हैं, वही रोजगार का सवाल भी खड़ा करते हैं। यह सस्ती राजनीति रोजगार के सवाल को और गंभीर ही बनाएगी। ये दल और खासकर कांग्रेस इससे अपरिचित नहीं हो सकती कि चीन की जो तमाम कंपनियां दुनिया भर में छा गई हैं, उनके विकास में वहां की सरकार का हाथ है।

यदि सरकारी नौकरियों के पीछे भागते युवाओं को संतुष्ट करना है तो फिर सरकारों को यह सुनिश्चित करना होगा कि निजी क्षेत्र रोजगार के पर्याप्त अवसर पैदा करे। इसी के साथ उन्हें यह भी सुनिश्चित करना होगा कि भर्ती परीक्षाएं रह-रहकर रद्द या फिर स्थगित न हों, क्योंकि जब ऐसा होता है तो परीक्षाओं के साथ सरकारों की भी विश्वसनीयता का क्षरण होता है।

(लेखक दैनिक जागरण में एसोसिएट एडिटर हैं।)

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दुनिया भर में यह ट्रेंड देखा गया है कि काफी लड़कियां दस साल के अंदर काम छोड़ देती हैं श्रम बाजार से निकाली क्यों जाती हैं महिलाएं



ऋतु सारस्वत

श्रम बाजार में महिलाओं के सामने आने वाली समस्याएं किसी भी स्तर पर छिपी हुई नहीं हैं लेकिन उनके संबंध में चर्चा इसलिए नहीं हो पाती क्योंकि महिलाओं के श्रम का बड़ा हिस्सा मूल्यहीन है। महिला सशक्तीकरण की तमाम बातें उस समय धराशायी हो जाती हैं जब कभी अर्थव्यवस्था गिरावट की ओर जाती है, भले ही उस गिरावट का कारण कुछ भी हो। अमेरिकन लेबर ब्यूरो की हालिया रिपोर्ट इस तथ्य पर टप्पा लगाती है। लेबर ब्यूरो के अनुसार फरवरी 2020 के बाद से 23 लाख से अधिक महिलाएं वहां काम से बाहर हो चुकी हैं। जनगणना ब्यूरो और फेडरल रिजर्व के विश्लेषण में पाया गया है कि पिछले साल जुलाई में काम न करने वाली तान में से एक महिला ने बच्चे की देखभाल को काम छोड़ने का कारण बताया है।

■ बेरोजगार होती मांएं

प्यु रिसर्च के अनुसार फरवरी और अगस्त 2020 के बीच 12 साल या इससे कम उम्र के बच्चों वाली मांओं के नौकरी खोने की दर पिताओं की तुलना में तीन गुना अधिक रही। यह स्थिति सिर्फ अमेरिका की हो, ऐसा नहीं है। दुनिया भर की कामकाजी महिलाओं का कम्बोबेश यही हाल है। इंस्टीट्यूट फॉर फिस्कल स्टडीज की एक रिपोर्ट बताती है कि बीते साल फरवरी से मई के बीच ब्रिटिश मांओं के बेरोजगार होने की संभावना पिता की तुलना में 23 प्रतिशत अधिक थी। महिलाओं के लिए रोजगार प्राप्त करना जब आम दिनों में ही किसी चुनौती से कम नहीं होता तो आर्थिक संकट

और अर्थव्यवस्था की बदहाली की स्थिति में उन्हें पीछे धकेल दिया जाना पीड़ादायक भले हो, हैरान करने वाला प्रतीत नहीं होता।

अमेरिका की एक रिपोर्ट बताती है कि कई देशों में यह मजबूत धारणा है कि महिलाएं पुरुषों की तुलना में नौकरी की कम हकदार हैं और आर्थिक संकट के समय यह पूर्वाग्रह और मजबूती के साथ सामने आता है। दरअसल पुरुषसत्तात्मक व्यवस्था में महिलाओं के आर्थिक स्वावलंबन को कभी भी महत्व नहीं दिया गया। उन पर निरंतर भावनात्मक और सामाजिक दबाव बना कर उन्हें घर की चारदीवारी के भीतर रहने के लिए विवश किया गया। इस संबंध में वैटी फ्रीडन ने अपनी किताब 'द फेमिनिन मिस्टिक' में बखूबी चर्चा की है। सभ्यता निर्माण के कुछ समय बाद जब पुरुष सत्ता वाली व्यवस्था ने संसाधनों पर नियंत्रण के अनगिनत फायदे देखे तो उसने इस पर अपनी पकड़ को मजबूत बनाने के लिए महिलाओं की क्षमता पर प्रश्नचिह्न लगाने शुरू कर दिए। यह

मातृत्व महिलाओं की रोजगार संभावनाओं पर नकारात्मक प्रभाव डालता है। शादी और मातृत्व के साथ ही सशुल्क रोजगार की संभावनाएं कम होती चली जाती हैं

मिथक लगातार प्रसारित और प्रचारित किया गया कि महिलाओं की श्रम बाजार में कोई आवश्यकता नहीं है।

नेशनल ब्यूरो ऑफ इकॉनमी रिसर्च के वेतन लिंग भेद अध्ययन में यह बात सामने आई कि मां बनने के बाद महिला कर्मचारियों की आय में बड़ी तेजी से गिरावट आती है जबकि पुरुषों का



Sanjay Hadkar

मुंबई के पवई में कामकाजी महिलाओं की एक अनौपचारिक बैठकी

करियर इससे प्रभावित नहीं होता है। डेनमार्क में बच्चों के जन्म के बाद महिलाओं के वेतन में अस्सी प्रतिशत तक की कमी आ जाती है। भारत में लगभग 40 प्रतिशत महिलाएं उच्च शिक्षा पूरी करती हैं और कार्यबल में शामिल होती हैं लेकिन एक दशक के भीतर वे कार्यबल से बाहर हो जाती हैं। 'हाई पोर्टेशियल अंडर हाई प्रेशर इन ईंडिया टेक्नॉलजी सेक्टर' की रिपोर्ट बताती है कि भारत में उच्च क्षमता वाले पुरुष और महिलाएं एक समान स्तर पर काम शुरू करते हैं लेकिन समय के साथ महिलाओं की स्थिति पुरुषों से कमजोर होती जाती है। ज्यादातर महिलाएं नौकरी तब छोड़ती हैं जब वे मध्य प्रबंधन की स्थिति में होती हैं और इसका सबसे बड़ा कारण होता है बच्चों की देखभाल की जिम्मेदारी।

हमें यह समझना ही होगा कि सामाजिक और आर्थिक दोनों ही कार्य व्यवस्थाओं का रुख महिलाओं के प्रति कठोर होता है। 'केयर वर्क एंड केयर जॉब्स फॉर द फ्यूचर ऑफ डिसेंट वर्क' की रिपोर्ट जो कि 90 देशों के अध्ययन पर आधारित है, बताती है कि मातृत्व निश्चित रूप से महिलाओं की रोजगार की संभावनाओं पर नकारात्मक प्रभाव डालता है। उनका रोजगार प्रायः तभी तक सुरक्षित रहता है जब तक उनकी शादी न हो जाए। शादी और मातृत्व के साथ सशुल्क रोजगार की संभावनाएं कम होती चली जाती हैं। यहां गौर करने की बात यह है कि जब आर्थिक विकास और उच्च शिक्षा के मानकों पर खरे देश भी महिलाओं के रोजगार को लेकर संवेदनशील नहीं हैं तो विकासशील देशों की क्या स्थिति होगी।

महिलाओं को बच्चों और घर की देखभाल तक सीमित करने की सोच मूलतः स्त्री आत्मनिर्भरता की विरोधी है। हालांकि इस सोच का कोई तथ्यात्मक आधार नहीं है, न ही इसके पीछे कोई युक्तिसंगत कारण है। 1988 में मारिया मोस, वेरोनिका वैन्हाल्ट थॉमसन और क्लॉडिया वेल्होम की लिखी किताब 'विमिन द लास्ट कॉलोनी' में महिलाओं के प्रति नजरिये और औपनिवेशिकसोच की चर्चा करते हुए कहा गया है कि दोनों में समानता यह है कि इन दोनों को स्वभावतः पिछड़ा हुआ माना जाता है। साधारण सी दिखने वाली यह बात उस सोच की परतें उधेड़ती है जो महिलाओं पर अपना वर्चस्व रखने की पुरुषवादी प्रवृत्ति के मुताबिक महिलाओं को हर उस रास्ते से दूर रखने की कोशिश करती है जो उन्हें समाज में निर्णायक भूमिका निभाने की ओर ले जाता हो।

■ बेहद धीमी रफ्तार

विश्व बैंक की रिपोर्ट 'विमिन, बिजनेस एंड टर्ला, 2019 के अनुसार दुनिया लैंगिक समानता की ओर बढ़ तो रही है लेकिन इसकी रफ्तार बहुत धीमी है। इस रफ्तार से अगले 50 साल तक भी महिलाएं पुरुषों के बराबर की स्थिति में नहीं पहुंच पाएंगी। रिपोर्ट में कहा गया है कि नौति बनाने वालों की दिलचस्पी प्रायः बच्चों वाली महिलाओं को काम से हटाने में होती है। उन्हें लगता है कि बच्चे पैदा होने के बाद महिलाएं पूरी क्षमता से काम नहीं कर पातीं। बहरहाल, इस रूढ़िवादी सोच से निपटने के लिए विश्व भर की सरकारों को प्रत्यक्ष और अप्रत्यक्ष रूप से अथक प्रयास करने होंगे। ऑर्गनाइजेशन फॉर इकॉनमिक कोऑपरेशन एंड डेवेलपमेंट का यह सुझाव जरूर महत्वपूर्ण है कि चाइल्ड केयर सब्सिडी दिए जाने में महिला के कामकाजी होने की संभावना बढ़ जाती है।