

WITH INITIAL INVESTMENT OF ₹2,000 CR

# Govt Saying Aye to Laying Strong AI Foundation

May rope in higher education institutes, key researchers for model that can be customised for wide range of applications

Aashish.Aryan@timesgroup.com

**New Delhi:** The Union government plans to build its own version of a foundational model for artificial intelligence (AI) which will be customised for use by Indian companies, entrepreneurs, academics and researchers, according to people in the know. There will be an initial outlay of ₹2,000 crore for the ambitious project that is likely to be launched after the ongoing parliamentary elections, they added.

The proposed initiative — which will see India join the ranks of countries such as China and the US that are already building foundational models, either for general or specific use in defence and agriculture — may be led by the IndiaAI Innovation Centre to be set up by the ministry of electronics and information technology under the ₹10,000 crore IndiaAI Mission, the sources said.

“The government will likely tap eminent higher education institutes and prominent researchers working on AI in the private sector to work on foundational model,” a senior official said. It could be a large action model (LAM) or large multimodal model (LMM) so that the output can be used for a wide range of applications and services, he said.

Foundational models are pre-trained generative transformers that are the starting point for the development of other AI models. They learn and train on old and known data to generate new responses depending on user input.



## Building Blocks

Foundational models are pre-trained generative transformers used to build other AI models

**IndiaAI Innovation Centre** may carry out the project under IndiaAI mission

Govt may tap open source libraries, digitised journals, global public access tools to train the model

Focus to also be on creation of specific use cases for govt depts

**330+** foundational models have been developed globally till date

# Plan to Use Public Data for Training

►► From Page 1

“The needs and specific demands of India are very different from other companies globally. This (foundational model) will aim to provide output in more than one native language, borrowing from all the work that has been done so far on projects such as Bhashini,” the official said.

Bhashini is an AI-based language translation platform and model developed by the IT ministry and launched in 2022.

Typically, foundational models are built both by private companies and federal governments. As of April 2024, more than 330 foundational models have been developed by private companies as well as governments, according to data from the Stanford Center for Research on Foundation Models. Globally, private companies such as Microsoft-backed OpenAI, Google, Amazon have led in the de-

velopment and training of advanced forms of foundational models. While even these models grapple with challenges such as hallucination, bias and lack of comprehension in responses, they are still ahead of the foundational models being developed by others.

The Indian government plans to use publicly available data, digitised records of books, journals and research papers from public libraries to train the model. It will also use any other anonymised non-personal data that is volunteered either by companies, startups or researchers, another official said.

“There are very obvious privacy concerns as well as copyright issues that come with data (used to train foundational models). So historically accurate data from books that are peer-reviewed, scientific research journals can be utilised. We may also look at a platform exclusively for Indian startups where non-personal and anonymised data can

be volunteered for training of the model,” an official cited above said.

In addition, the foundational model will also be trained on global publicly available datasets and open-source tools for machine learning.

“No such foundational model can be made in isolation. While we aim to build and train this model to be India-specific, the neural networks behind the learning engine will need all the data it can consume,” a source said.

## USE CASES

The government wants all this data to be made available for the training of the model so that ample use cases can be developed before the foundational model is shipped out for commercial use, they added.

Officials pointed out that there will also be a focus on the creation of specific use cases for government departments.



MANJU KAPUR

# THE WRITER OF SMALL THINGS

*With her quietly beautiful prose, Alice Munro made the ordinary extraordinary*

I AM SITTING in my study staring at my copy of Alice Munro's *New Selected Stories*, a collection of some of her "finest work" from her last five published volumes, (a somewhat arbitrary decision — who decides this anyway?) put together on the occasion of her winning the Nobel Prize for Literature in 2013. I have just heard of her death. The first reaction I usually have on hearing of a writer's demise — one who has mattered to me — is that a voice has gone, that unique and peculiar stream of words has stopped forever. This is how it was with Javier Marías, Paul Auster, Martin Amis, all so recently deceased.

With Alice Munro, the feeling is more intimate. Her worlds could be my worlds. Not literally, but in the way in which she wrote about them. Her subject was the daily life of men, women and children, their thoughts and feelings as they go through childhood, school, college, marriage, old age and death, in a movement both swift and slow. Swift because so much was encompassed in 30-40-50 pages, while her attention to detail slowed down the narrative as she described incidents that illustrated whole lives.

I flip through the *New Selected Stories* to remind me of how this writer once spoke to me. I reread the first story, 'The Love of a Good Woman', reprinted from her 1998 eponymous volume. This is the work of a writer

Munro subject was the daily life of men, women and children, their thoughts and feelings as they go through childhood, school, college, marriage, old age and death, in a movement both swift and slow. Swift because so much was encompassed in 30-40-50 pages, while her attention to detail slowed down the narrative as she described incidents that illustrated whole lives.

whose craft is honed to perfection. It's not showy, it does not call attention to itself, it's a clear prism between the author and the reader. In the words of James Joyce — a writer whom Munro resembles not at all — 'The artist, like the God of the creation, remains within or behind or beyond or above his handiwork, invisible, refined out of existence, indifferent, paring his fingernails.'

'The Love of a Good Woman', like all of Munro's writing, is rich in detail — of houses, smells, people's faces, their bodies, the hair on their bodies, of the food, the way eggs crinkle around the edges when they are fried. Each one says something about the person, the place. Gradually she opens up a world, so fully imagined, that it seems this is not a short story we are reading, but the history of a community.

To return to the fried eggs mentioned earlier; they stayed in my mind, and for good reason. A whole world is contained in them. A boy, maybe 10, is frying the eggs, none of his friends know how good he is in the kitchen. His mother watches him, she is unable to do much, and he is much better at frying than she is. They are both tense, the father can arrive any time, drunk or savage, lose his temper, and throw the eggs and all on the floor. Or he can ask the boy to make him eggs the way he likes them, "hard as shoe leather" (a reflection of the man) while at the same

time needling him about his skills: "He would make some fellow a dandy wife." Tension and violence hover in the kitchen.

Munro treats her men as delicately and realistically as her women. 'The Bear Came Over the Mountain' is about a man whose wife has dementia. This story illustrates the ease and brilliance with which she spans time. From that past to this, from that state of love, emotion, attraction, sex, fidelity, infidelity, to this. The number of pages (35) in which this is done is deceptive, for the shifts in time and perspective give the stories a depth that is the height of economic artistry — that one usually associates with novels.

It doesn't matter where or when she sets her stories — what matters is that she can say of a character, "She was insulted, by her own mind" ('The Love of a Good Woman') is a sentence that leaps out at you. It can reflect you, or anybody you know.

Looking at *New Selected Stories*, I am revisited by an old desire. I want to write like Alice Munro. But then I realise that the whole point of Alice Munro is to teach a person to write as themselves. It seems a simple lesson — but hard to follow as you try to polish your own writing style in a way that is true to yourself and to what you have to say.

*Manju Kapur is the author, most recently of, The Gallery*

# Unlocking the potential

*Addressing youth unemployment, providing quality jobs, and bridging regional disparities are crucial imperatives for leveraging India's demographic dividend and sustaining economic growth*



ALOK RANJAN

The most discussed and debated topic in India today is the status and level of unemployment in the country. Forceful views are being expressed on both sides of the issue during election campaigns, and it is also a hot topic of disagreement among economists. Experts are quoting data to show that there is growth without employment in India, while an equal number are presenting statistics to show that the problem of unemployment is being overstated and that there is, in fact, an increase in both employment and labour force participation rates. The beauty of statistics is that you can selectively use it to argue in favour of increasing unemployment or the reverse.

India needs a national employment policy to enjoy the fruits of its demographic dividend

India is enjoying a demographic advantage that is likely to last for another thirty years. We have 27 per cent of our population categorised as youth, with the median age of the country being 29. One has to look beyond data analysis to see the anxious faces of educated youth and realise their major concern: whether they will get employment and whether the quality of employment will be commensurate with their qualifications? Only if the youth are able to get the desired quality of jobs will India realise its demographic dividend and propel itself on the path of rapid economic growth, so that it occupies its deserving position among developed nations and avoids being snared in the middle-income trap. India is the cynosure of all eyes because of its dramatic growth rate of 7 per cent, which is among the highest in the world, and we are on the path to becoming the third-largest nation in terms of GDP in the next 4 to 5 years. To become a developed nation within the next 25 years, we must grow at an even faster rate of about 8 per cent or more per annum. This would only be possible if we devise a strategy to ensure that this growth is accompanied by growth in employment, so that the aspirations of the



There is a need to look beyond data analysis to see the anxious faces of educated youth and realise their major concerns

youth find expression and their energy and higher productivity make the dream of an inclusive and developed India possible in the near future.

Recently, the *India Employment Report 2024* was published by the Institute for Human Development on labour and employment issues. This report was primarily based on an analysis of data from the National Sample Surveys and the Periodic Labour Force Surveys between 2000 and 2022. The report arrived at some paradoxical inferences. It found that key labour market indicators, such as the labour force participation rate, the workforce participation rate, and the unemployment rate, showed long-term deterioration between 2000 and 2019. However, these indicators have shown improvement since then. Surprisingly, the female labour market participation rate has shown an upward trend from 2019 onwards, particularly in rural areas, despite the impact of the COVID-19 pandemic. This is explained by the fact that after 2019, the trend in the Indian labour market to transition from agriculture into non-farm sectors has been halted and even reversed. There is a discernible rise in the share of agricultural employment as well as an increase in the absolute size of the agricultural workforce.

A matter of concern is that nearly two-thirds of the incremental employment after 2019 comprises self-employed workers, among whom unpaid female family workers predominate. The share of regular work has been declining. This is further reflected in the fact that the real wages and earnings of regular workers have remained stagnant or declined.

The report also finds that employment in India is predominantly of a casual and self-employed nature, with more than 82 per cent of the workforce engaged in the informal sector. This implies that employment in India is of poor quality, which is why the employment condition index remains low. Due to increasing mechanisation and capital use, employment generation in India has become more and more capital-intensive, which is contrary to the labour market needs of the country. Digitalisation and the introduction of new technology are further changing the structure of industrial employment. This has also been accompanied by a rise in the number of gig workers who have hardly any social security. The increase in the capital intensity of industry has led to an improvement in labour productivity, and the increasing growth rate has been closely linked to technological advancements that have favoured capital-inten-

sive production. Employment in manufacturing has expanded by only 1.7 per cent between 2000 and 2019.

The services sector has been the prime mover of India's growth since 2000, contributing significantly to the creation of more decent and productive employment. Consistently, areas like software, IT, and financial services have generated high-paid, regular formal job opportunities. Every year in India, 7-8 million people join the labour force, and if they can be productively employed, it will give a huge boost to the Indian growth story. The concern, according to surveys, is that youth employment is, by and large, of poorer quality than employment for adults. Educated youth are more likely to look for employment outside agriculture, presenting a challenge for policymakers to provide appropriate jobs.

The report shockingly found that in 2022, the unemployment rate among youth with secondary-level education was six times higher than the average, and for graduates, this figure was nine times greater at 29.1 per cent. It is a fact that youth with higher levels of education seek regular salaried jobs, while those with little education are more often engaged in casual or informal work. Youth with technical degrees are more likely to be

employed in the tertiary sector. Returns to education are low at lower levels of education and highest for those with a graduate degree or technical education. More and more young people are seeking higher levels of education. Educational attainment among the youth has improved significantly in the past two decades.

A disturbing trend is the disparity in the level and quality of employment. States like Bihar, Jharkhand, Uttar Pradesh, and Odisha have found that youth are not able to fully take advantage of demographic factors, whereas the situation is much better in the southern and western states. It is also a fact that states are at different stages of demographic transition, which influences their employment outcomes. These regional disparities will need to be addressed so that the entire country can move forward on the path of growth with employment.

Some areas of employment will lose out to artificial intelligence and other technological disruptions. However, it is also true that new jobs will be created, and the education system and skilling ecosystem will have to tailor their inputs so that students are equipped with the skills that will make them employable in the future. The issue of employability of the youth is often raised by industry, though academicians tend to challenge this by saying that they provide education, which is different from training. It cannot be denied that there is a gap in perception between the two, which can only be bridged by both parties sitting together. The youth must get employment opportunities and high-quality employment. Policies regarding industrialisation and other sectors will have to make the provision of employment their cornerstone. Above all, as I have advocated before, India needs a national employment policy to enjoy the fruits of the demographic dividend.

The writer is an ex-Chief Secretary, Govt of Uttar Pradesh. Views expressed are personal



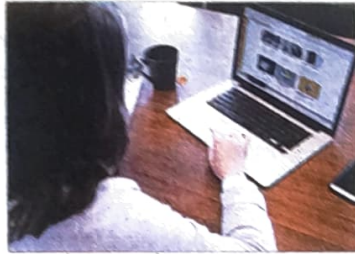
AARUL MALVIYA

# The rise of online internships for students

Students are opting for online internships to gain practical experience, develop crucial skills and prepare themselves for the evolving job market

In today's rapidly evolving educational landscape, students are increasingly recognising the importance of proactive engagement in shaping their future careers. Embracing the adage of "building a door" to their professional aspirations, school students are turning to online internships as a means to gain valuable experiential learning opportunities and prepare themselves for the dynamic job market that awaits them upon graduation.

Online internships have witnessed a surge in relevance in recent years, offering school students an array of benefits that extend beyond traditional in-person placements. **Flexibility and Accessibility:** Unlike traditional internships with fixed schedules, online internships provide students with a flexible work environment tailored to accommodate their schedules. This flexibility allows them to optimise productivity according to their peak hours of concentration while balancing other commitments such as classes or extracurricular activities. Additionally, the absence of commute time associated with virtual internships fur-



ther enhances students' ability to dedicate time to their roles.

**Skill Development :** Engaging in tasks aligned with their field of interest, interns acquire practical experience and hone essential competencies crucial for professional success. By demonstrating initiative and self-reliance in completing assigned projects remotely, interns showcase their readiness to thrive in diverse work environments. These experiences not only deepen their expertise but also bolster their resumes, setting them apart in competitive job markets.

**Access to Talent Beyond Geographical Boundaries:** Online internships offer employers access to a diverse pool of talent unrestricted by geographical boundaries. This expanded reach enriches organisations with diverse perspectives, skills and cultur-

al insights, fostering innovation and collaboration within teams. Additionally, it prepares companies for the evolving dynamics of the modern workforce by developing remote work capabilities.

**Exploration of Career Paths:** Online internships serve as a platform for students to explore different career paths and gain insight into various industries. This exploration phase allows students to clarify their interests, identify strengths and weaknesses and make informed decisions about their future career goals.

**Networking Opportunities:** Despite being remote, online internships provide students with networking opportunities that can be instrumental in their career development. Interacting with professionals within their chosen industry, connecting with fellow interns and building relationships with mentors and supervisors can lead to mentorship opportunities, job referrals and valuable insights into industry trends.

**Innovative Learning Experiences:** Through interactive projects, virtual meet-

ings and online training sessions, online internships offer innovative learning experiences that complement traditional classroom education. These immersive experiences bridge the gap between theory and practice, fostering critical thinking.

**Cultural Exposure:** Working with colleagues from diverse backgrounds exposes students to different perspectives, communication styles and work cultures, enriching their understanding of the global economy's interconnectedness.

Engaging in online internships significantly boosts students' resumes and bolsters their prospects for future employment. These experiences serve as tangible evidence of their initiative, adaptability and capacity to thrive in dynamic work environments, positioning them as desirable candidates poised for success in their chosen career paths. Thus, online internships not only enrich students' skill sets but also empower them to navigate the complexities of the modern job market.

*(The author is the Founder, Zamit; views are personal)*

# Universities, student groups lobby PM Sunak to protect post-study visa offer

PTI ■ LONDON

Universities and student groups on Tuesday urgently lobbied British Prime Minister Rishi Sunak to safeguard the country's post-study visa offer, which has been dominated by Indians to gain work experience for around two years at the end of their university degree. Amid reports that Sunak is considering either restricting or ending the Graduate Route to curtail soaring migration statistics ahead of a general election, a group of nearly 30 university vice-chancellors and the National Indian Students and Alumni Association (NISAU) UK have issued detailed letters of appeal to 10 Downing Street. They list a series of factors in favour of keeping the Graduate visa scheme unchanged, including the benefits that international students bring to the UK economy in a competitive global higher education marketplace.

"Modelling by consultancy London Economics shows that

a single cohort has a net economic benefit of GBP 37 billion to the UK economy; as well as through the soft power that Britain's international graduates generate for the country over time, including through furthering ties of trade and diplomacy," reads the NISAU UK letter addressed to Sunak.

"Indeed, 70 per cent of Indian students have told us that the ability to gain meaningful work experience is a critical element in their decision to choose between competing international destinations, of which the UK is one... the Graduate Route allows the opportunity to gain this work experience for a temporary period. It is non-extendable and does not count towards permanent settlement. This means that neither students nor Graduate visa holders should be considered 'immigrants' in the context of the long-term picture of migration," it notes.

Their appeal comes a week after the influential Migration Advisory Committee (MAC) advised the government to let

the scheme continue as it found no abuse of this post-study work offer. It also confirmed that Indians topped its tally, accounting for 89,200 visas between 2021 and 2023, or 42 per cent of the overall grants, and were likely to be "most affected by any restriction on the Graduate Route". In their letter to Sunak, universities in the north of England – from Sunderland to Sheffield, Leeds to Lancaster, Liverpool to Teesside, Bradford to Huddersfield, and York to Newcastle – said they will all be harmed by the removal or reduction of this visa as it is an "intrinsic part of the educational offer that has made the UK so attractive to brilliant students from all around the world".

"The Graduate Visa Route is regarded by students in key markets like India as an integral part of their educational experience. The MAC review made clear that the removal of this route would make the UK less attractive and thus would cause considerable financial detriment to universities around the country," reads their joint letter.

"International student tuition fee income has long cross-subsidised underfunded research and has increasingly become critical to cross-subsidise the teaching of UK undergraduate students because of the frozen tuition fee. Universities cannot continue to absorb the costs of teaching UK undergraduates without some form of alternative funding source," they caution.

On top of their visa fees, international students who find work and start businesses contribute billions of pounds in income tax, national insurance and VAT annually. The university chiefs point out that they are also usually net contributors to the National Health Service (NHS) through the NHS surcharge.

The Russell Group of the UK's leading universities issued its appeal over the weekend, with CEO Tim Bradshaw warning that there has already been a 10 per cent decline in international applications for post-graduate courses starting this September in the wake of the clampdown on students being able to bring dependant family members.

# Science



## Nurturing tomorrow's nature stewards: The crucial role of environmental education

By VIDHI CHURIWALA

In today's rapidly changing world, the need for environmental education has never been more pressing. As we witness the consequences of climate change, biodiversity loss, and environmental degradation, it becomes increasingly clear that the future of our planet rests in the hands of today's youth. Environmental education plays a pivotal role in shaping the mindset and actions of children, equipping them with the knowledge, skills, and values needed to become responsible stewards of the environment.

One of the reasons why this is crucial for children is its role in fostering a deep understanding of the interconnectedness of all living beings and ecosystems. Through interactive learning experiences, children can grasp concepts such as the water cycle, food webs, and the delicate balance of nature. This understanding enhances their scientific literacy and instils a sense of awe and appreciation for the natural world.

In certain preschools, children are encouraged to connect intimately with nature, exploring plant leaves, noting their varied shapes and shades of green, and examining their different parts to understand each plant's uniqueness.

Some methods for fostering environmental awareness could be to form environmental clubs to engage in preservation activities, such as setting up recycling systems, planting organic gardens, and conducting cleanliness drives on campus to instil responsibility for maintaining clean, litter-free environments. One can also incorporate environmental preservation into the curriculum and implement eco-friendly policies in schools, including visible practices like installing solar panels. Students can be asked to launch an adopt-a-plant program for schools and homes.

Teaching empathy for all living creatures through storytelling and role-playing exercises that highlight the importance of caring for habi-

tats is also beneficial for the students to understand. Students should be encouraged to organize special events dedicated to the environment, involving parents to create a collective impact on environmental consciousness.

Children develop a sense of environmental consciousness and responsibility by learning about environmental issues such as pollution, deforestation, and climate change. They begin to recognize their role in protecting the planet and are inspired to take action.

The benefits of environmental education extend beyond environmental conservation. Studies have shown that exposure to nature and

environmental learning positively impacts children's physical and mental well-being. Time spent outdoors enhances creativity, reduces stress, and promotes a sense of connection to the natural world. By incorporating nature-based activities and outdoor experiences into education, we not only nurture environmental stewardship but also support holistic child development.

It is crucial for educators, parents, and communities to prioritize environmental education in order to promote sustainability. Schools can provide outdoor learning spaces, facilitate hands-on environmental projects, and teach students to have their own small kitchen gar-

dens. Parents should encourage environmental awareness at home, engage in nature-based activities with their children, and model sustainable behaviours. By investing in environmental education for children, we empower individuals to make informed decisions, respect nature, and work towards a harmonious coexistence with the Earth. With education, we can create a world where environmental stewardship is not just a responsibility but a way of life.

The writer is an environment enthusiast and an animal welfare activist, and is the Founder of Kaloms Ideas Welfare Foundation. She is also a chartered accountant.



# Summer camp after vacation as NDMC schools on poll duty

Vibha.Sharma@timesgroup.com

**New Delhi:** New Delhi Municipal Council (NDMC) will not be conducting summer camp classes this summer vacation, as the majority of its schools (32 out of 45) are being used for Lok Sabha election services, and around 70% of teachers are on election duties. Through these special classes, the council focuses on improving the basic reading, writing, and numeracy skills of students.

“We usually conduct special classes during the summer camp from May 11-31 for interested students to, inter alia, improve their proficiency in language and numeracy under the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN) mission of Indian govt. This year, while the schools were closed for summer vacation from May 11, due to the Lok Sabha elections, our 32 schools will be occupied until May 26. Also, there is a heatwave in the city, which is why we decided not to initiate the annual exercise for students of classes III to VIII this month,” said an NDMC official.

“Now, the classes will be carried out in July. In July-August, we aim to hold a reading and understanding competition for students to assess their command of language,” said the official. The students have been told to practise well during the summer vacation to prepare themselves for the competition.

Meanwhile, an NGO has set up summer camps at Atal Adarsh Vidyalaya School in Moti Bagh and Atal Adarsh Primary School, Lodhi Road for va-

rious activities for the interested students of classes VI-VIII of NDMC schools.

NDMC has, however, started special classes in two school centres for providing assistance to the few students who have received compartmental marks in classes X and XII board exams this year. These classes are being organised subject-wise towards the aim of 100% results.

In this academic year, a total of 19 children received compartmental marks in Class X, most

Photo for representation



The summer camp classes aim to improve the basic reading, writing, and numeracy skills of students

of whom are in science and mathematics subjects, whereas 19 other students received compartmental marks in Class XII, the majority of whom are in Political Science. “We want all of them not just to pass the exam but also to score well in these subjects, which is why we have decided to conduct classes for the compartment exams scheduled in July,” said the official.

Two centres are set up at Navyug Senior Secondary School at Peshwa Road and Atal Adarsh Vidyalaya at Havlock Square. This year, NDMC claimed to have achieved nearly 99% pass percentage, with 1,722 students in XII and 1,366 students in X enrolled for board exams this year.



# Industry, students force engg colleges to change

## Many Are Bringing In Experiential Learning To Curriculum

Veena.Mani@timesgroup.com

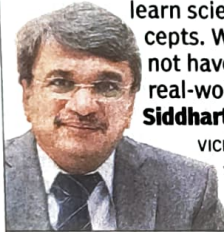
Ruta Harchekar is about to finish her course at the design school at Vishwakarma University, Pune. During the two-year course, one of the requirements was to identify a societal problem and try to solve it. She did some research, went around talking to people, and one of the things she found was that those in the 40 to 60 age group were tech savvy and wanted an online solution where they could meet like-minded people, form communities, and share interests. She designed the UX for an app for this age group, and is still working on developing the app. During campus placements recently, she showcased this project. Accenture has just offered her a job. Ruta says the project played a big role in this.

A long-time criticism of India's educational system has been its total focus on theory, with little attention paid to applications of what is learnt in the classroom. This has meant that students are not industry-ready when they graduate, with the result that companies have to spend money, effort and months of time to train graduates in how to develop products or deliver projects. But this seems to be rapidly changing, as pressure builds on engineering colleges to find good placements for their students.

Colleges are creating curriculum that includes developing hands-on experience. They are getting into industry partnerships to enable such projects for students.

### NO DEARTH OF RESOURCES TO LEARN; APPLICATION IS KEY

“This generation does not have a dearth of resources to learn scientific concepts. What they do not have is exposure to real-world projects.”



**Siddharth Jabade** |  
VICE CHANCELLOR,  
VISHWAKARMA  
UNIVERSITY

When students work on a product and seek the advice of subject matter experts, they gain sectoral knowledge and understand how a company works.

**Manish Prateek** |  
DEAN, SCHOOL FOR ENGINEERING  
SCIENCE, GD GOENKA SCHOOL OF  
ENGINEERING AND SCIENCE



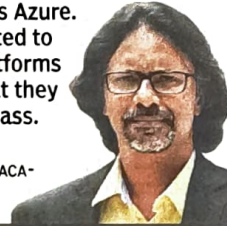
We are looking to give credits to students incubating a startup at the institute's incubation centre.

**Suresh Ukarande** |  
PRINCIPAL, KJ  
SOMAIYA COLLEGE OF  
ENGINEERING



We have given students access to Google's server and programming environment, and academic licences to Amazon's AWS and Microsoft's Azure. Students are expected to use these cloud platforms and implement what they have learnt in the class.

**Chandrashekar Ramanathan** | DEAN, ACA-  
DEMICS, IIIT-BANGALORE



I designed the UX for an app for those in the 40-60 age group which I showcased during placement interviews. I think that really helped.

**Ruta Harchekar** |  
STUDENT,  
VISHWAKARMA  
UNIVERSITY



We require students to do a project in every core subject from the second semester. External evaluators come for assessment of the projects.

**Ramakrishna Akella** |  
PRINCIPAL & DIRECTOR,  
CAMPUS PLACEMENTS,  
KL UNIVERSITY,  
HYDERABAD



### Even students demand change

Siddharth Jabade, vice-chancellor of Pune-based Vishwakarma University, says both industry and students are demanding an experiential approach, and that's what universities are moving towards. "Differential equations have been a core part of our curriculum for many years. While we all studied it as a concept, we learnt to use it only after getting a job. But GenZ is more curious about how to apply such concepts. So, I have to link it to, say, how it can be used in developing an Apple product. For a speech-enabled device, what is the differential equation used to make the user interface? Companies are also looking to hire people with a worldview - those with the knowledge of what is going on in society. So, that's the kind of teaching we are now doing," he says, adding that such teaching, combined with the kind of projects that students like Ruta are doing, is reflecting in the quality of placements.

IIIT-Bangalore is asking students to refer to more books than just their prescribed textbooks

for each course to drive self-learning and a research-oriented mode of learning. Chandrashekar Ramanathan, dean of academics at IIIT-B, says fundamental courses remain the same as they were 25 years back when he was a student. "But everyone needs to know the latest developments in these technologies so that they can be deployed into projects easily when they start working," he says. The students have been given access to all the major cloud environments, and they are expected to use them to apply coding scripts they have learnt.

### New forms of credits

GD Goenka School of Engineering and Science sends its final year students to work with subject matter experts at various companies the college has tied up with. They are made to choose an industry-specific problem, and find a solution for this. One such problem involved building an IoT-based security system with AI-based real-time tamper alerts. "Subject matter experts come to our college regularly to interact with our students. Beyond that,

when they work on a product and seek the advice of those experts, they gain sectoral knowledge and understand how a company works. Credits are given for this," says Manish Prateek, professor at the college and dean of the school for engineering science.

At the KJ Somaiya College of Engineering, students are asked to take up subjects like machine learning or cyber security from the second year so that they are introduced to new technologies. Suresh Ukarande, principal of the college, says they are looking to give credits to students incubating a startup at the institute's incubation centre.

Ramakrishna Akella, principal and director of campus placements at KL University in Hyderabad, says their students are expected to get certifications in cloud and other new technologies from the likes of Amazon. These involve practical applications of the technologies. The university also requires students to do a project in every core subject from the second semester. External evaluators come to assess these projects.

# Plug Haryana's skill gap to combat job crisis



**BHUPINDER SINGH HOODA**  
FORMER CM, HARYANA

INDIA is facing a severe and widespread unemployment crisis, which is often described as a 'ticking bomb' of joblessness. Job creation must become the central focus of national political and policy discussions. The Congress has recognised the gravity of the situation and prioritised employment, social justice and inclusiveness in its election promises outlined in the *Nyay Patra*.

It is widely acknowledged that unemployment can be addressed through job opportunities, but the issue is complex and multifaceted, extending beyond mere joblessness. Consequently, finding a comprehensive solution to unemployment has been a long-standing challenge for successive governments. This necessitates an informed debate and brainstorming to understand the issue as a political one. Additionally, current social, economic and technological factors must be taken into account to develop an effective strategy to combat this problem.

Rather than delving into the intricacies of statistics derived

from multiple surveys conducted by various agencies using different methodologies, we should strive to address this social issue with a more pragmatic and compassionate approach, rather than relying on purely academic or bureaucratic solutions.

Among the states, Haryana is worst affected by unemployment, with the rate approximately three times higher than the national average. This was exemplified by the fierce competition for three Group D posts in the District Court, Jind; thousands of highly qualified applicants, including those with BE/ME, MBA and other postgraduate degrees, vied for these posts. The indifferent attitude of the state government towards educated youth over the past nine years has exacerbated the dire situation.

Vacancies in government departments — over two lakh, including those of teachers and healthcare workers — were not filled. They were either put on hold or on sale. Frequent paper leaks, cancellation of examinations and massive irregularities in the selection process frustrated the youth of the state; they either started migrating to other countries, risking their lives for a living, or were drawn into the dark world of violence, crime, drugs, depression or suicide. Instead of facing this grave crisis with the utmost compassion, sincerity and priority, the government's policy response was myopic, populist, callous and



**SOLUTION:** The development of new smart cities can be a magnet for a large number of jobs due to the agglomeration effect and the availability of opportunities. FILE PHOTO

deceptive.

What added insult to injury for the unemployed youth was the formulation of the Deployment of Contractual Persons Policy, 2022. This policy is being implemented through a government-approved agency (digital labour exchange), Haryana Kausal Rozgar Nigam Limited. Through this agency, highly qualified youth are being temporarily deployed for various job roles on low and fixed wages. They are even 'exported' to war-hit countries like Israel.

Haryana has the potential to create numerous jobs if a clear, consistent, comprehensive and credible multipronged policy is developed. If the Congress comes to power, our top priority will be to create a conducive environment for generating

Haryana has the potential to create numerous jobs if a multipronged policy is developed.

employment opportunities.

In Haryana, the agriculture sector is the largest job provider, with over 50 per cent of the population engaged in agriculture and allied activities. Promoting food processing, agri-technological advancements, storage, agri-exports, agri-marketing, dairying and horticulture can create a significant number of jobs. Increasing MGNREGA rates and linking them with other initiatives will help create more productive and purposeful jobs in rural areas.

In 2019, the manufacturing sector was the second-largest employer after agriculture. However, as of 2023, the construction sector has taken its place, followed by the service sector, trade and hospitality, with manufacturing now in

the fourth place. Improving the ease of doing business — providing land at reasonable prices, skilled labour, adequate and affordable credit facilities — along with effective market and labour laws, and cheap and sufficient electricity supply will stimulate job creation in the manufacturing sector.

The government is the third largest employer. More than two lakh vacancies need to be filled in a time-bound manner. To effectively and efficiently deliver services to the people and keep pace with the increasing number of job seekers, more permanent jobs need to be created in the government, public undertakings and cooperative sectors.

The development of new smart cities can be a magnet for a large number of jobs due to the agglomeration effect and the availability of opportunities. It will also have significant developmental and societal consequences. A major push for education, health, nutrition and social security infrastructure can be achieved by creating quality and well-paid jobs for ASHA (Accredited Social Health Activist) personnel, anganwadi workers, mid-day meal providers and midwives.

The low participation of women in the labour force (25 per cent) represents a significant untapped potential for employment. This can be addressed by creating a supportive environment, implementing maternity and labour

laws, ensuring women's safety and providing them with accommodation and transportation facilities. The urban unemployment rate is 10.1 per cent, while rural joblessness is at 7.4 per cent. Therefore, a new policy similar to MGNREGA should be launched in cities and urban areas. Additionally, promoting remote work opportunities can expand the job market, especially for women and youth in rural areas.

Improving the employability of the workforce is crucial for taking advantage of the demographic dividend. This requires enhancing the quality of education, particularly foundational literacy and technical education. The ASER (Annual Status of Education Report) raises concerns over education infrastructure in Haryana, highlighting the need for improvement. Prolonged unemployment and a lack of skill upgrading can reduce a person's employability.

There is a significant skill gap in the state, leading to unemployment. Therefore, a skill development revolution is necessary for up-skilling, re-skilling and adopting innovative processes to meet the new job requirements. Establishing a knowledge hub in Haryana with international-level institutions of excellence in technology, research and innovation can help meet the modern job market requirements. It will take persistent and pragmatic policies and political will to overcome this crisis.

12/2/20

# एनईपी से शिक्षा में बड़ा बदलाव, मानविकी विषयों के नए संस्थान खुलें

उद्यम जवाबदाय • जागरण

नई दिल्ली: लोकसभा चुनाव में डेढ़ करोड़ नए मतदाता जुड़े हैं। इनमें अधिकतर छात्र हैं। इनका वोट हर बार की तरह इस बार भी अहम है।



युवाओं के मुद्दे रोजगार और शिक्षा तक सीमित नहीं हैं। राष्ट्रीय सुरक्षा और विकास की बदलती तस्वीर ने उन पर असर डाला है। हालांकि, युवाओं का कहना है कि सभी को सुनकर नहीं पक्ष और विपक्ष का घोषणापत्र पढ़कर ही वोट डालना चाहिए।

अंबेडकर विश्वविद्यालय दिल्ली (एयूडी) के वीए आनर्स के छात्र चिराग आनंद ने कहा, वे पहली बार वोट करने जा रहे हैं। 10 साल में बड़े बदलाव हुए हैं। राष्ट्रीय शिक्षा

नीति (एनईपी) ने शिक्षा के स्तर को सुधारा है। वोकेशनल कोर्सेस ने छात्रों के कौशल में सुधार का मौका दिया है। हालांकि इसको और अधिक व्यावहारिक बनाने की जरूरत है। चिराग ने कहा, तकनीकी और प्रबंधन की शिक्षा पर सरकार का अधिक जोर होता है। यह अच्छा है, लेकिन उन्हें मानविकी विषयों के संस्थानों की संख्या बढ़ानी चाहिए। दिल्ली विश्वविद्यालय जैसे संस्थान देश में खोले जाने चाहिए। राजधानी के छात्र बड़ी संख्या में विदेश में पढ़ने जाते हैं। पिछले साल आइआईटी दिल्ली और मद्रास ने विदेश में अपने परिसर शुरू किए। यह अभूतपूर्व उपलब्धि है। शिक्षा के स्तर को ऊपर उठाने में इससे मदद मिलेगी। एयूडी की इकोनॉमिक्स आनर्स की छात्रा महक रावल ने

- राष्ट्रीय सुरक्षा और राष्ट्रवाद बड़ा मुद्दा, युवा इसका रख रहे ध्यान
- वन नेशन वन राशन योजना का भी युवाओं को मिल रहा लाभ

कहा, मानविकी विषयों में दो-तीन विषयों में कारपोरेट में जाव मिलती है। शेष को शोध के क्षेत्र में जाना पड़ता है। पिछले सालों में शोध में अच्छा काम हुआ और एनईपी में इसको बढ़ाने का प्रविधान है, लेकिन इसके क्षेत्र को व्यापक किए जाने की जरूरत है। जिससे रोजगार के अधिक अवसर सृजित हों। चिराग ने कहा, अटल लैब अच्छा प्रयोग है। यह भी विज्ञान के छात्रों के लिए ही है। मानविकी कहीं पीछे छूट रही है। इकोनॉमिक्स आनर्स के ही छात्र ओनम सिंह ने कहा, स्कूलों

में मानसिक स्वास्थ्य के लिए बहुत काम नहीं हो रहा है। वर्तमान में यह बड़ा मुद्दा है। हर प्राइवेट और सरकारी स्कूल में मानसिक स्वास्थ्य के लिए विशेषज्ञ होना चाहिए। इससे आत्महत्याओं के मामलों में कमी आएगी। ओनम ने कहा, नई दिल्ली के इलाकों को छोड़ दें तो शेष दिल्ली में विकास की रफ्तार नहीं दिखती। विश्व के बड़े शहरों में शुमार राजधानी दिल्ली दूसरी देशों की राजधानियों की तुलना में कमतर नजर आती है। यहां व्यापक स्तर पर सड़कें बनाने की जरूरत है। उन्होंने कहा, यूनिकार्न स्टार्टअप से देश के युवाओं को रोजगार मिलने में मदद मिली है। युवा इसकी तरफ आकर्षित भी हो रहे हैं। विकसित भारत का संकल्प अच्छा है। इसमें युवाओं को शामिल

करना सगहनीय है। हम सभी से फीडबैक लिया गया है और हम इसे बनता देखेंगे। ओनम ने कहा, देश सीधे एग्रीकल्चर से आइटी पर पहुंच गया। बीच में हमने महत्वपूर्ण उत्पादन कार्यों को पीछे छोड़ दिया। 10 सालों में मेक इन इंडिया और आत्मनिर्भर भारत से इसको धार मिली है।

मंदिरों को अर्थव्यवस्था की रीढ़ बनाने का हो काम : चिराग ने कहा, राम मंदिर निर्माण ने धार्मिक पर्यटन को बढ़ावा दिया है। स्टेच्यू आफ यूनिटी से पर्यटन बढ़ा, लेकिन राम मंदिर की तुलना में वह काफी कम है। भारत में ऐसे और भी क्षेत्र हैं। जहां के मंदिरों को धार्मिक पर्यटन के रूप में बढ़ाकर, पुस्तकालय खोलकर, बाजार लगाकर विकसित किए जा सकते हैं।

नौकरियां निकल रही, लेकिन संख्या और बढ़े

डीयू के इतिहास के छात्र अक्षय सिंह ने कहा, कम नौकरियों का दुष्प्रचार किया जा रहा है। सरकारी नौकरियां भी निकल रही हैं। कुछ विभागों में सर्वाधिक नौकरियां निकली हैं, लेकिन उनकी संख्या हमेशा की तरह कम है। उनको बढ़ाने पर ध्यान दिया जा सकता है। हिंदी के छात्र शेखर सुमन ने कहा, वन नेशन वन राशन योजना भी छात्रों की मदद कर रही है। छात्र उसके जरिये यहां राशन ले रहे हैं। इससे उनके खाने का खर्च बच रहा है। छात्र मंगलेश ने कहा, राष्ट्रीय सुरक्षा बड़ा मुद्दा है। सांस्कृतिक राष्ट्रवाद देश में आया है।

# परिणाम आधारित शिक्षा पर व्याख्यान

ग्रीन इंडिया

मेरठ। स्वामी विवेकानन्द सुभारती विश्वविद्यालय में फैकल्टी डेवलपमेंट प्रोग्राम का आयोजन सत्यजीत रे प्रेक्षागृह में किया गया। कार्यक्रम में मुख्य वक्ता के रूप में जैन विश्वविद्यालय बैंगलोर के कुलपति प्रो. राज सिंह ने परिणाम आधारित शिक्षा के विषय पर व्याख्यान दिया।



कार्यक्रम का आयोजन

प्रतिकुलपति डॉ. अभय शंकरगौड़ा की अध्यक्षता में हुआ। कार्यक्रम का शुभारंभ प्रतिकुलपति डॉ. अभय शंकरगौड़ा, संकायाध्यक्ष, शैक्षिक एवं निदेशक शोध प्रो. अमर प्रकाश गर्ग, डीन लॉ कॉलेज डॉ. वैभव गोयल भारतीय, डॉ. पिंटू मिश्रा, डॉ. आर.के. घई, डॉ. श्रवण कुमार, डॉ. रेनू मावी, डॉ. सोकिन्द्र कुमार ने माँ सरस्वती के समक्ष दीप प्रज्वलित कर किया। प्रतिकुलपति डॉ. अभय

शंकरगौड़ा ने स्वागत भाषण प्रस्तुत किया। उन्होंने मुख्य वक्ता जैन विश्वविद्यालय बैंगलूरु के कुलपति प्रो. राज सिंह का स्वागत करते हुए परिणाम आधारित शिक्षा के विषय पर आयोजित फैकल्टी डेवलपमेंट प्रोग्राम के उद्देश्य से सभी को रूबरू कराया। मुख्य वक्ता जैन विश्वविद्यालय बैंगलोर के कुलपति प्रो. राज सिंह ने परिणाम आधारित शिक्षा की भारत में आवश्यकता,

गुणवत्ता और मूल्यांकन के आंकलन पर विश्लेषणात्मक व्याख्यान प्रस्तुत किया। उन्होंने कहा कि परिणाम आधारित मूल्यांकन प्रदर्शन आधारित होता है। उन्होंने कहा कि शिक्षकों और शिक्षार्थियों के पास इस बात की साझा समझ होती है कि क्या हासिल करने की आवश्यकता है। सीखने के उद्देश्य स्पष्ट और मापने योग्य होते हैं, जो हर किसी को अपने प्रयासों को विशिष्ट लक्ष्यों की ओर संरेखित

करने में सक्षम बनाते हैं। उन्होंने कहा कि परिणाम आधारित शिक्षा में शैक्षणिक संस्थानों को छात्रों को अंतर-सांस्कृतिक अनुभव, अंतर्राष्ट्रीय सहयोग और विविध दृष्टिकोणों से परिचित होने के अवसर प्रदान करने के लिए प्रोत्साहित किया जाता है। उन्होंने परिणाम आधारित शिक्षा के विषय पर विस्तारपूर्वक सभी का ज्ञान वर्धन किया।

संकायाध्यक्ष, शैक्षिक एवं निदेशक शोध प्रो. अमर प्रकाश गर्ग ने परिणाम आधारित शिक्षा के प्रयोगात्मक पहलुओं पर प्रकाश डाला और शिक्षकों को पाठ्यक्रम विकसित करने हेतु बारीकियों का विश्लेषण किया। उन्होंने विश्वस्तरीय सक्षम और सामाजिक रूप से प्रसंगिक ग्रेजुएट बनाने के लिये पाठ्यक्रमों को विकसित करने हेतु विभिन्न पहलुओं पर प्रकाश डाला।

# आधुनिक परिप्रेक्ष्य में ज्योतिष शास्त्र की उपादेयता विषयक राष्ट्रीय बेविनार सम्पन्न



3

इन्दिरा गांधी राष्ट्रीय मुक्त विश्वविद्यालय के क्षेत्रीय कार्यालय अहमदाबाद द्वारा आयोजित आधुनिक परिप्रेक्ष्य में ज्योतिष शास्त्र की उपादेयता विषयक राष्ट्रीय बेविनार आज दिनांक 21.05.024 को सम्पन्न हुआ, जिसमें मुख्य अतिथि के रूप में अपने विचार व्यक्त करते हुए विश्वविद्यालय के निदेशक क्षेत्रीय सेवा प्रभाग डॉ उमेश चन्द्र पाण्डेय ने बताया कि आधुनिक परिप्रेक्ष्य में ज्योतिष का ज्ञान अत्यन्त आवश्यक है। ज्योतिष शास्त्र का विज्ञान से अत्यन्त गहरा सम्बन्ध है। हमारे प्राचीन ऋषि पूर्णतः वैज्ञानिक थे, उन्होंने ज्योतिर्विज्ञान के आधार पर काल गणना की जो आधुनिक समाज के लिए पथ-प्रदर्शक है। वक्ता के रूप में आचार्य अजय मिश्र ने कर्मों

के आधार पर ग्रहदोषों पर विस्तृत चर्चा करते हुए बताया कि व्यक्ति जैसा कर्म करता है तदनुरूप फल की प्राप्ति होती है। मुख्य वक्ता के रूप में नेहरू ग्राम भारती मानित विश्वविद्यालय प्रयागराज के ज्योतिष, कर्मकाण्ड एवं वास्तु शास्त्र के विभागाध्यक्ष प्रोफेसर ब्रजेन्द्र मिश्र ने ज्योतिष शास्त्र की उपादेयता पर विस्तृत प्रकाश डालते हुए बताया कि भारतीय ज्ञान परम्परा और ज्योतिष के द्वारा ही भारत को विश्व गुरु बनाया जा सकता है। डॉ मिश्र ने इग्नू द्वारा संचालित एम्.ए.जे.वाई. तथा भारतीय ज्ञान परम्परा पाठ्यक्रम की भूरि भूरि प्रशंसा की। कार्यक्रम की अध्यक्षता क्षेत्रीय कार्यालय अहमदाबाद की वरिष्ठ क्षेत्रीय निदेशक डॉ अरुण त्रिवेदी भट्ट जी ने किया। उन्होंने अपने

अध्यक्षीय उद्बोधन में कार्यक्रम के सफलता की भूरि भूरि प्रशंशा की तथा बताया कि ज्योतिष भारतीय मूल की चतुर्दश विद्याओं में प्रमुख है, यह वेद रूपी पुरुष का नेत्र है। यह मानव जीवन के लिए प्रत्येक क्षेत्र में सहयोगी एवं कल्याणकारी है। कार्यक्रम के प्रारम्भ में बेविनार के संयोजक एवं सहायक क्षेत्रीय निदेशक डॉ देव नारायण पाठक ने वैदिक मंगलाचरण किया तथा सभी अतिथियों का स्वागत और अभिनन्दन किया तथा सहायक क्षेत्रीय निदेशक डॉ जयेश पटेल ने सभी अतिथियों को धन्यवाद ज्ञापित किया। इस अवसर पर डॉ.संतोष शुक्ल, डॉ संजय भारती, काजल पाण्डेय, स्वाति द्विवेदी, संजय मिश्रा तथा अरुण पाठक सहित अनेक गणमान्य लोग उपस्थित रहे।