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Reha Sharma and Jobin
M. Kanjirakkat

In the biggest challenges in education is the creation of an engaging, enriching and equitable classroom atmosphere which is ideal for learning. If the children are in a state of emotional stress or worry, they are unlikely to be open to learning the topic introduced by the teacher. Children have to feel that the classroom is an un-stressful space that promotes learning, something that human beings naturally do. The manner in which knowledge is divided into different areas may not be obvious or intuitive to all the students. This could create a kind of disconnect between the child's natural curiosity and the pedagogical practices in school.

Affective filter

This disconnect could manifest itself as fear, anxiety, lack of motivation or lack of self-confidence. Unless a teacher makes a special effort, classrooms create emotional states that are not ideal for learning. Linguist Stephen Krashen uses the metaphor of a filter to describe how emotional factors make it difficult for young second language learners in classrooms to learn their target language. The emotional factors create an 'affective filter', which blocks the student from picking up language in a smooth manner. Can we recreate in the classroom something similar to the natural situation in which a child picks up his home language? Noam Chomsky, who has been the most influential linguist after World War II, observed that



M.A. SRIRAM

children learn their home languages in natural contexts without any explicit teaching.

One way to bring the classroom to life in engaging ways and lower students' affective filters is to use theatre-based techniques. In one interactive English session conducted at a government higher primary school in Bengaluru, the aim was to teach question words to Kannada-medium students of Class 6. The teacher leveraged her years of theatre experience to pique the children's

interest through planned activities that had them actively engaged. Though she did not speak Kannada, her theatrical techniques lowered the affective filter, fostering an environment highly conducive to language learning. The use of expressions, movements and language reduced anxiety while increasing students' motivation, making them more receptive learners. Students were given the option to act out their responses to demonstrate comprehension. Collab-

orative skits facilitated peer learning in the target language. The use of sentence-frames provided scaffolding and practise, and performing built confidence.

This experience underscores an important lesson – embodied theatrical approaches can enrich and enliven the learning process in powerful ways. Often, educational institutions prioritise intellectual content over physical expression and kinetic engagement. However, our

work in developing stories as Open Educational Resources (OER) revealed how training teachers in voice modulation, pitch control and theatrical narration equipped them to become captivating storytellers.

In language teaching

Many teachers feel hesitant to incorporate theatre techniques into their pedagogy. Some believe theatre requires special talent or training they lack. Some might even feel

that such activities take time away from 'teaching the textbook'. However, many educators unknowingly already use theatre-based strategies in their classrooms for various purposes related to language teaching – say, a Marathi teacher using dramatic storytelling to introduce new vocabulary, a Kannada teacher in Bengaluru making students act out dialogues to practise conversational skills, or a Hindi teacher leveraging role-playing to explore different perspectives on a literary text.

Simple theatre-based activities have immense value, even for teachers untrained in theatre. Basic techniques like using different voices or sound effects, exaggerated expressions, or gestures to tell a story spark engagement and imagination. Having students act out vocabulary or discussions embeds learning kinesthetically. Short improvised skits can help build listening skills, focus and teamwork.

Children themselves could be trained using recorded stories and theatrical presentations of them so that they become more comfortable interacting in unfamiliar situations. The process of making children more comfortable with making stories or theatre-related recordings, their confidence would improve and can have other benefits, such as helping children learn public speaking. So the effectiveness of theatre in classroom contexts may improve as a result of, and not in spite of, digital technology.

The writers are Programme Associates-Education at IT for Change, an NGO that promotes the use of digital technologies for equity and social justice.

SCHOLARSHIPS

The Cadence Scholarship

Eligibility: Open to Indian nationals pursuing undergraduate and postgraduate courses in Delhi NCR, Bengaluru, Pune, or Ahmedabad

Rewards: Financial support
Application: Online
Deadline: May 30
www.b4s.in/edge/TCSP4

University of St. Andrews GREAT Scholarship

A joint initiative of the British Council and the University of St. Andrews, the U.K.

Eligibility: Open to citizens of India who have applied for a PG Master's programme such as MLitt, MRes, or M.Sc., and meet the English language requirement of their chosen course, or have begun a 10-week pre-sessional English course by June 30, 2024.
Rewards: Up to £10,000 a year
Application: Online
Deadline: May 31
www.b4s.in/edge/GUAI

The Antant Fellowship

Antant National University, Gujarat, aims to empower individuals to become solutionaries who can design, build and preserve equitable built environments.

Eligibility: Open to undergraduate-degree holders in any discipline, who demonstrate a commitment to improving the built environment and have a strong academic record and extracurricular achievements.
Rewards: Up to 100% of the tuition fee and other benefits.
Application: Online
Deadline: July 31
www.b4s.in/edge/TAFM1

Courtesy: Buddy4study.com

Create a unique story

Balance AI's efficiency with human insight and creativity to ensure that resumes not only meet technical criteria but also tell a compelling story

Rajat Vashishta

Job seekers today face the dual challenge of standing out in a crowd while adapting to digital hiring trends. This involves creating a well-crafted resume that tells a compelling story about the candidate's professional journey. With the exponential surge in job seekers, how can one get one's resume to catch the attention of the recruiter, especially as trends and styles change almost every other day?

How AI helps

This is where Artificial Intelligence (AI) can play a role by augmenting various aspects through automation. While scripting a resume, AI tools analyse an individual's data, educational and experience records, skills, awards, certifications and various other aspects to build a solid profile and identify the latest trends, layouts and formats to create a resume that aligns with the current demand. Further, it can assess job profiles and requirements to enhance resumes and generate tailored profiles that best fit the desired position and recruiter's requirements. Along with the profile, AI uses similar techniques to generate a cover letter to complement the resume. Hence, it offers an efficient and objective mode of resume building that can be constantly adapted to changing job profiles and descriptions. Moreover, it also ensures a consistency



OFF THE EDGE

Nandini Raman

I am doing B.Tech. Electronics and Communication Engineering (ECE). What are my career options immediately after graduating? Manasa

Dear Manasa,
As an ECE graduate, your options include being an Electronics Engineer, Telecommunication Engineer, Network Engineer, Embedded Systems Engineer, Very Large Scale Integration (VLSI) Design Engineer, Signal Processing Engineer, Automation Engineer, Software Developer/Engineer, Telecom Network Planning Engineer, Radio Frequency (RF) Engineer, Test Engineer, Instrumentation Engineer, Product Development Engineer, Broadcast Engineer, Field Application Engineer, Hardware Design Engineer, a Consultant or a Project Manager. Identify your interests, strengths, and career goals. Networking, internships, and participation in industry events will enhance your job prospects and help you explore different opportunities.

I am in Class 12 with Psychology as a subject. I am thinking of either Psychology or English Literature for my undergraduate course. Apart from teaching and writing, what are my options if I choose English? Also, can I become a psychologist without writing the NEET? Raksha

Dear Raksha,
Both Psychology and

Make the right choice

Uncertain about your career options? Low on self-confidence? This career counselling column may help

Dear Nelson,
IISER Bhopal offers a four-year B.S. programme in Economics with the option to obtain a BS-MS (Dual Degree) by spending an additional year. The training exposes students to most areas of Economics and enables them to pursue a research career as well as secure employment in the industry. All admission-related information including the entrance exam dates can be viewed at <https://www.iiseradmission.in>. Check with the institute directly for accurate and up-to-date information.

Her other options can include a B.A. or B.Sc. in Economics offered by universities and colleges across India; some also offer integrated M.Sc. programmes. Some Specialised Institutes like Delhi School of Economics, Madras School of Economics, NMIMS and Gokhale Institute of Politics and Economics offer quality programmes in Economics. Students applying to Delhi colleges will need to take the Common University Entrance Test (CUET) and other relevant exams based on the college that they apply to.

Disclaimer: This column is merely a guiding voice and provides advice and suggestions on education and careers.

The writer is a practising counsellor and a trainer. Send your questions to eduplus.thehindu@gmail.com with the subject line Off the Edge

in formatting the resumes and cover letters with an objective evaluation.

Today the use of AI tools to optimise the recruitment process is rampant. One such tool is an Applicant Tracking System (ATS), which essentially means that a resume typically goes directly into an organisation's database.

The software helps companies streamline the process by sorting and organising applications by measuring the candidate's competency and bringing the best ones to the front. Thus, if a resume is not optimised for ATS, it may not be seen by a hiring manager. AI tools use keyword identifications to tailor resumes to ATS standards and ensure that the initial level is cleared.

Human element

However, it is important to note that, while AI may be a starting point to create resumes, the technology should only be used to complement the process. Though powerful, AI's analytical capabilities do not grasp the subtleties of personal experiences or the emotional intelligence that characterises human interactions. Thus it can overlook the nuances such as overcoming challenges or

personal growth moments, which may offer depth and context to the application and resonate with a human recruiter.

Another problem is that by standardising all information, AI may dilute personal achievements or fail to highlight one's innovative problem-solving skills or adaptability or not reflect a person's potential for growth; all of which are valuable skills today.

The human element is indispensable when it comes to integrating creativity and empathy in the resume. Humans can infuse their writing with personality and interpret and articulate their experiences in ways that connect emotionally with the recruiter. Thus the resume becomes not just a list of accomplishments but a narrative that engages and persuades.

Strike a balance

So how does one use AI in drafting a resume? Basically, keep it as a tool for a preliminary draft but invest time in personalising the content. Add personal anecdotes that demonstrate key skills or values and customise the resume for specific job roles. Integrate feedback from mentors or peers to leverage the human element to its ful-

lest. Here are a few key tips:

Structure: Use AI tools to get insights into effective formats and keyword optimisation but personalise the content to reflect your unique journey and professional ethos.

Personal Achievements: While AI can suggest standard achievements, emphasise those that showcase your individual contributions and impact.

Review and Customise: Always review AI-generated content to ensure it aligns with your voice and goals. Customise sections to add a personal touch, making your resume not just a list of experiences but a narrative of your professional journey.

Stay Updated: AI can help you stay abreast of resume trends, but incorporating these should be a thoughtful choice rather than a blind follow. Ensure that any trend aligns with your industry and personal brand.

Balancing AI's efficiency with human insight and creativity ensures that resumes not only meet technical criteria but also tell a compelling story that captures a candidate's unique professional identity and potential.

The writer is the Founder of Resumod.

English Literature offer diverse career opportunities. With English Literature you can look at careers in content writing/editing, publishing, public relations (PR), copywriting/advertising, journalism, library and information science, media and communication, marketing and communications, and social media management.

With Psychology you can branch out into clinical psychology, counselling/psychotherapy, educational psychology, industrial-organisational psychology, forensic psychology, health psychology, human resources (HR), research and academia.

The National Eligibility-cum-Entrance Test (NEET) is only for admissions to medical and dental programmes. Admissions to psychology courses are based on your Class 12 result and/or entrance exams specific to the programme. Identify your interests, strengths, and long-term career goals.

You can also explore interdisciplinary programmes that combine both Psychology and Literature. Also, look up specific universities and research the programmes they offer to find the best fit for your aspirations.

My daughter is in Class 11 (Humanities stream of Kerala State Board). We learnt that IISER Bhopal has a B.S. in Economics. What is the admission process for this and the Integrated M.S.? Where can we find the study material for the entrance exam? Are there similar courses elsewhere? Nelson

I am in third year of B.Sc. Medical

More to read?
For more articles, columns and news on admissions, new courses and events in schools and colleges, visit: www.thehindu.com/education

To college and beyond

Part 2 of a guide to standardised tests for college admissions; this time in the Indian context



CAREER CUES
Richa Dwivedi Saklani

Last month, the column looked at the important standardised tests for college admissions abroad. This second part looks at entrance exams for colleges in India, which involve a variety of national and state-level tests and are critical for students seeking admission to undergraduate programmes in Engineering, Medicine, Law, and other fields.

JEE Main

The Joint Entrance Examination Main, usually held in January and April, is the key to entering top Engineering and Architecture programmes at the Indian Institutes of Technology, the National Institutes of Technology (NITs), the Indian Institutes of Information Technology (IIITs), and other centrally funded technical institutions. It has two parts: Paper 1 is designed for engineering aspirants, while Paper 2 for those interested in architecture. Currently, for

B.Arch., Physics, Chemistry and Math in Class 12 is required. Applications are online.

NEET
The National Eligibility-cum-Entrance Test, held annually in May, is the national exam for admissions into undergraduate Medical and Dental programmes in government and private colleges. This pen-and-paper test covers Physics, Chemistry, and Biology. Applications are online.

CLAT
The Common Law Admission Test holds the key to undergraduate and post-graduate Law courses at 22 National Law Universities in India. Usually held in December, it tests skills in English, logical reasoning, legal knowledge, general knowledge, current affairs, and basic Maths across five sections. It is best to take it while in Class 12.

BITSAT
The annual online Birla Institute of Technology and Science Admission Test is usually held from May to June for admission into BITS Pilani's Engineering, Science, and Pharmacy programmes. The compu-

ter-based exam, which tests knowledge of Physics, Chemistry, Maths/Biology, logical reasoning, and English. Applications are online.

State-level Exams
Various states in India hold their own exams for admissions into Engineering or Medicine such as MHT-CET in Maharashtra, KCET in Karnataka, and EAMCET in Andhra Pradesh and Telangana. Dates may vary but usually these are held between April and June. Applications have to be made online through the State Education Board website.

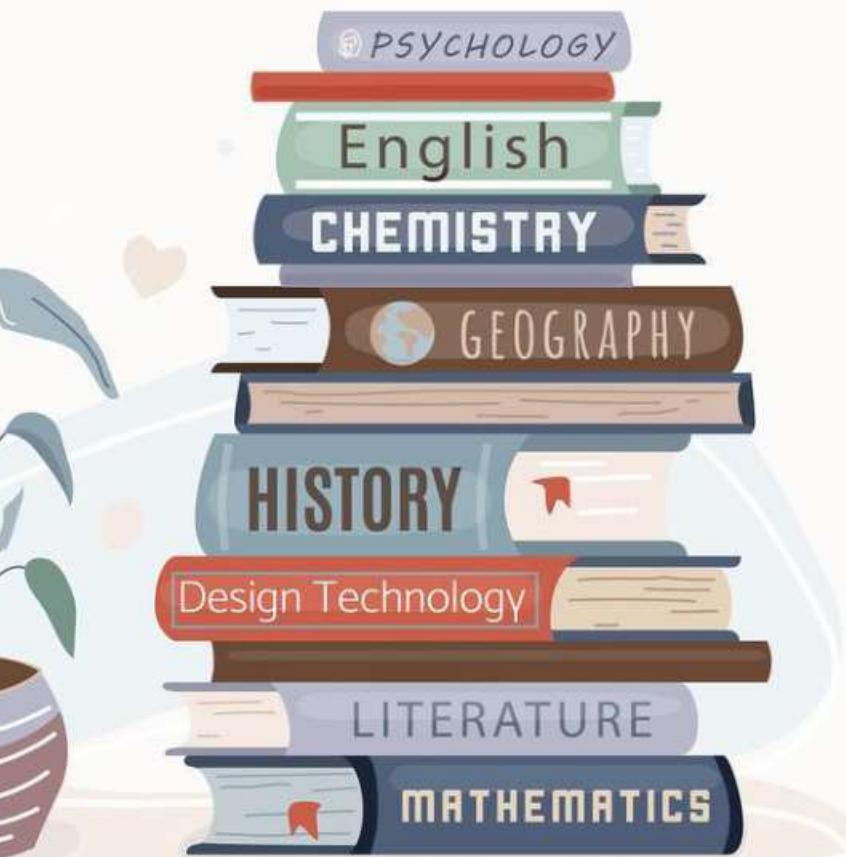
For Design courses

The three-hour Undergraduate Common Entrance Examination for Design, which assesses creativity, visualisation and problem solving, is the entry point to design programmes. It includes MCQs and numerical answer questions. UCEED is essential for admission into top institutes like the Indian Institutes of Technology (IIT) in Mumbai, Guwahati, Hyderabad, and the Indian Institute of Information Technology Design and Manufacturing (IIITDM) in Jabalpur, among others. Scores are also accepted by other col-

leges, but check each institute's specific requirements and stay updated via the UCEED website.

The National Institute of Fashion Technology (NIFT) hosts its own exam in January-February and checks creativity and skills for fashion and design through various tasks. For some programmes, it also includes a situation test, group discussion, and interview.

The Design Aptitude Test (DAT) of National Institute of Design (NID) is



usually held in two parts with the Prelims in December or January and the Mains a few months later. The former tests creative and analytical skills and the Mains may involve practical tests and interviews.

The Srishti Institute of Art, Design and Technology, Bengaluru, hosts the Srishti Manipal Institute of Art, Design and Technology Entrance Exam (SMAT), and a portfolio review and personal interview. The timing varies, so the official website will give the accu-

rate schedule.

CUET

Managed by the National Testing Agency (NTA), the Common University Entrance Test (CUET) is essential for admissions into undergraduate programmes at central universities across India, such as Jawaharlal Nehru University (JNU), Delhi University (DU), Banaras Hindu University (BHU), and the University of Allahabad. Typically held between May and July, it assesses the applicant's knowledge of a

wide array of subjects through objective-type questions but allows students to select those that best match their interests and the requirements of their preferred universities. The registration process usually begins in February with all procedures conducted online. Exams are held across the country.

Liberal Arts and Interdisciplinary institutions

Private liberal arts colleges such as Ashoka University,

FLAME University, Symbiosis, Krea University, Shiv Nadar University, and Plaksha University require passing specific entrance exams that evaluate critical thinking and communication, among other skills.

Ashoka University holds the Ashoka Aptitude Test, FLAME University uses FEAT, Symbiosis has SET, Krea University offers KIC, Shiv Nadar University uses SNUSAT, Christ University has CUET (Christ University Entrance Test) and Plaksha University's admission process includes unique evaluations reflecting their curriculum. These exams are usually held from December to May, mostly online, catering to a national applicant pool. Successful candidates may also face interviews. For exact requirements, formats, and deadlines, check each university's website.
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Getting ready for entrance exams is crucial, not just to get into college but also to build key skills such as analysis, time management, and problem-solving. These exams open doors to top schools and require thorough preparation. So, take prep seriously, use practice exams, study with friends, and seek extra help if you need it. This journey is not just about passing a test; it's about setting yourself up for success.

The writer is Founder and CEO, Inomi Learning, a Gurugram-based career and college guidance firm. info@inomi.in

Driven by curiosity

A curiosity- and question-driven approach not only helps students academically but also builds important life management skills



Nishchal Dwivedi

How do birds find their way back to their nests? Can traffic patterns be mapped using mathematical equations? Why do some clouds appear black? Humans have always been driven by curiosity. The stalwarts in any field of study have always been the ones who marvel at phenomena – natural and man-made – asking questions and relentlessly searching for answers. This allowed us to learn and evolve intellectually. So how can we develop school curricula to support this insatiable spirit of inquisitiveness? This is where the role of research comes in.

What is research?

Research is, by definition, a "creative and systematic investigation" aimed at deriving new conclusions and establishing truth. The process is a deeply transformative journey that involves keen observation of the world around and identifying gaps in existing knowledge. Thus, by including a module or unit on scholarly academic research at the high-school level, teachers can introduce students to entirely new ways of structured thinking, ways to challenge prevailing norms and actually pursue answers to questions in a rigorous and systematic way, while also developing crucial life skills.

Students must begin by identifying a research question, followed by gathering evidence and logical thinking, to arrive at conclusions. The evidence can be based on previous studies, observed phenomena or collection of quantitative and qualitative data that is studied by statistical analysis. Based on this analysis, they derive insights and conclusions that advance their understanding of their question.

Students can research any

topic from any field: from the impact of languages on our psychology to how atoms can be used to do computation. Regardless of the topic, students will be compelled to go deeper than their school coursework, and propel themselves on an academic investigation driven by their own curiosity. This curiosity and question-driven approach helps them build important personal skills like problem solving, critical thinking, academic writing, and time management. Not only do they develop critical thinking skills but by reading and understanding articles and studies by experts, they also get to dip their toes into an unknown world.

Gaining an edge

With higher education becoming more competitive each passing year, colleges seek students who demonstrate a love of learning, the ideals of free inquiry, and the commitment to follow through on a serious, long-term academic endeavour.

By conducting research at a young age, students gain a strategic advantage relative to their peers. They display a depth of technical competence in their field as well as the capacity for interdisciplinary innovation with the use of scientific tools.

Universities seek students who show distinctive academic preparedness; thus, a programme that instills these values among high schoolers will be beneficial and external validation through published research papers in high-school research journals and presentations at conferences will help them stand out.

By implementing policies that mandates skill and value-based programmes fuelled by research in all academic curricula, we can ensure a generation of leaders driven by scientific inquiry.

The writer is Senior Director, Athena Education (Athena Knowledge Center).

Nicola Green
Alberto Marzo

The global healthcare landscape faces unprecedented challenges. A global population set to reach 9.6 billion by 2050, the expectation of longer, healthier and more active lives, and limited financial resources are putting immense pressure on governments and healthcare systems worldwide. Biomedical Engineering offers a way to address these complex issues and pave the way for a healthier future while offering exciting and rewarding career opportunities.

Biomedical Engineering merges engineering principles with Life Sciences to design, develop, and improve healthcare technologies to address unmet clinical challenges. From sophisticated medical devices and prosthetics to cutting-edge biomaterials and diagnostic tools, biomedical engineers play a pivotal role in transforming healthcare delivery.

Requirements

This inherently multidisciplinary field requires individuals with a strong foundation in En-

gineering, Biology, Chemistry, Medicine, Maths and Physics, which equips them to tackle complex healthcare problems and develop innovative solutions. Apart from technical expertise, they must also possess critical thinking and problem-solving abilities, and excellent communication skills to collaborate effectively with healthcare professionals, industrialists and academics at the interface between Engineering and Medicine.

Biomedical Engineers are at the forefront of developing cutting-edge solutions that address some of the most pressing healthcare concerns globally. They are instrumental in creating:

Minimally invasive surgical tools that reduce recovery times and improve patient outcomes, regardless of location.

Advanced prosthetics and implants that enhance mobility and quality of life for individuals with disabilities. Biocompatible materials for tissue engineer-

ing and regenerative medicine to repair and replace damaged tissue.

Diagnostic tools powered by AI and computational modelling for early and less invasive disease diagnosis and personalised treatment plans, improving healthcare access and outcomes globally.

In the past, the medical technology industry relied on Mechanical or Electrical engineers who then gained medical knowledge through experience over years. Today, biomedical engineering offers a more efficient path by combining Engineering and Medicine from the start. Investing in and pro-

moting Biomedical Engineering education and research is crucial to bridge the gap between the growing demand for healthcare solutions and the availability of skilled professionals globally.

Collaboration

This will not only create lucrative career opportunities for individuals but also empower nations to become leaders in healthcare innovation, fostering international collaboration and knowledge sharing, as recently demonstrated by the ground-breaking British-Indian collaboration between academics, industry (Electrospinning) and the L.V. Prasad Eye Clinic in

Hyderabad. Their innovative materials and procedures for corneal regeneration offer increased availability and affordability, highlighting the potential of such collaborations to address global healthcare needs. Initial phase I clinical trials have successfully demonstrated patient safety of these techniques.

The Med-Tech sector is witnessing exponential growth worldwide, especially in India, driven by factors like increasing government investments, rising healthcare awareness, and a growing elderly population. The Indian medical devices market is expected to reach a staggering \$50 billion by 2025, creating a significant demand for skilled biomedical engineers within the country (FICCI, 2022).

India's Med-Tech sector is among the top 20 global markets and the fourth largest in Asia. Coupled with a rising market, there are government initiatives such as the Production Linked Incentive scheme for promoting domestic manufacturing of medical

devices worth ₹3,420 crores, Promotion of Medical Device Parks worth ₹400 crores and the National Medical Devices Policy released in 2022 with the aim of developing India as a MedTech manufacturing hub.

However, India's potential extends beyond its borders. With its growing pool of talented engineers, affordable research costs, and focus on innovation, India can become a global hub for med-tech development and manufacturing. This, coupled with international collaborations and knowledge exchange, can significantly contribute to addressing the global healthcare challenges.

Biomedical Engineering presents a compelling career path for individuals passionate about making a difference in the healthcare landscape and people's life, both domestically and internationally. By harnessing the power of multidisciplinary skills and fostering a culture of innovation, this field holds great potential to address the evolving challenges of the global healthcare sector and pave the way for a healthier and more equitable world for all.

The writers are the Course Directors of UG and M.Sc. Biomedical Engineering at the University of Sheffield, the U.K.

Guardians of privacy

With the rising demand for data privacy lawyers, law schools need to build tailored courses and prepare their students.

Avinash Dadhich
Yashu Bansal

A Digital India becomes a reality, our personal data are being processed every second for various uses by businesses and governments.

Consequently, there are many efforts around regulating technology and its use. Thanks to the intensive use of personal data, India passed the Digital Personal Data Protection Act, 2023 (DPDPA), leading to a rising demand for data pri-

vacy lawyers for efficient regulation, compliance, and litigation in this field, which will further help build interpretation of the law and maintain its essence.

With the hope that regulations will bring more clarity to the vagueness of the law, businesses are currently working on understanding their own databases and preparing to adopt efficient data management practices. There is a growing requirement for professionals with both legal and technical skills to comply

be done through the following means:

Interdisciplinary learning: Satisfying the real goals of data privacy will require knowledge of multiple fields to be able to creatively solve new-age problems. In addition to programming languages, the courses should provide a basic understanding of technological developments.

It is also very important to discuss the basics of ethics and responsible technology for a broader understanding.

Academia-industry interface: Bridging the gap between theory and practice is essential now, especially considering the evolving role of lawyers as business leaders. Law schools must build advisory boards that include industry professionals to help design

appropriate courses. At least 25% of the lectures should be delivered by industry professionals, to achieve the goal of academia-industry interface.

Hands-on practical training: Law schools should organise sessions and guest lectures with industry professionals so that students get a first-hand idea of the practical challenges in implementing data privacy. Similarly, workshops with activities such as preparing internal manuals to implement privacy policies will amplify the learning experience. Students must also be encouraged to pursue alternative learning options to boost their interdisciplinary knowledge and participate in conferences, seminars and events to enhance their knowledge and exposure.

Long-term internships: Having students can work under DPOs, CISOs, and privacy firms for around 3-4 months will add immense value to their knowledge and give them an opportunity to implement their understanding of technology laws and data privacy.

Lastly, legal innovations must be encouraged and programmes around data privacy and data rights awareness should also be included. We are only at the beginning of the long road to personal data protection, and it is the responsibility of law schools to prepare lawyers who will be the guardians of personal data and privacy in India.

Avinash Dadhich is the Director of Manipal Law School, and Yashu Bansal is Assistant Professor at Manipal Law School, MAHE Bengaluru.



FREEPIK

with the data protection laws. Businesses will also be required to fulfill very specific requirements under the new law, and this will require all-embracing privacy lawyers. The combination of legal and tech skills will allow lawyers to venture into new fields of work. To create privacy leaders of tomorrow, law schools need to build tailored courses and prepare their students. This can