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Repair those rifts

Why integrating Health Humanities into the medical curriculum is vital

In India, Health Humanities is often a part of Humanities departments, where discourse frequently slips into romance rather than rigour. One strand glorifies pre-modern practices by claiming ancestors lived flawlessly and modernity ruined everything, ignoring life expectancy data. Another upholds pseudoscientific traditions as resistance to colonialism. Both overlook the epistemological foundations of evidence-based healthcare.

The rightful place for Health Humanities lies in medical colleges where Humanities scholars and practitioners work together, guided by science, committed to equity and ethical practice, and attentive to what Paulo Freire described as "critical consciousness" leading to a nuanced understanding of lived realities and possible solutions.

At a crossroads

In India, Health Humanities is at the crossroads where inequity, cultural taboos, and poor communication continue to impact healthcare amid rapid advancements in healthcare practices. Fear of medical procedures, lack of transparency, and heavy costs push many patients towards pseudoscientific and faith healing practices. Integrating Health Humanities in medical education is vital to restore human dignity through ethics and equity.

Prof. Sathyaraj Venkatesan of NIT Tiruchi notes a contrast in the function of Health Humanities in English and Cultural Studies departments and medical colleges. While Humanities departments study illness as a cultural narrative, medical schools emphasise observation, clinical empathy, and communication as Humanities components in healthcare education. The way forward is to combine these strands so that cultural analysis informs scientific care, and exposure to clinical realities refines cultural discourses on healthcare.

India's medical curriculum can draw on global models: Columbia University's narrative medicine trains in listening beyond symptoms; Stanford pairs literature and bioethics to examine autonomy and justice; King's College London blends philosophy and history to debate resource allocation and end-of-life care. These efforts show how science directs care and humanistic training restores social and ethical context.

Marginalised groups bear heavier disease burdens yet receive less care. At a recent conference, Dr. Srijithesh P.R. from NIMHANS, Bengaluru, suggested reading healthcare in India using Thomas Piketty's equity lens showing how inherited inequality sustains deprivation and how treatment costs push families into poverty. At the other end, affluent Indians flying abroad for treatment signals eroding trust in the domestic 'healthcare industry'. Taboos around reproductive health and mental illness still impede access to quality healthcare.

Recently, the Medical Council introduced electives in Health Humanities. The National Medical Commission included Attitude, Ethics, and Communication (AETCOM) in the curriculum. While some students agree that these courses renewed their sense of purpose, many colleges treat them as a checkbox. Integrating humanist socio-cultural and economic inquiry into the medical curriculum remains a distant dream.

A stumbling block in achieving this vision is the incompatibility among disciplines. Some Humanities scholars view tech-driven healthcare advancements as dehumanising, and some doctors dismiss humanistic inquiry as unscientific and absurd. Such resistance places the Humanities and Medical Sciences as warring factions and impedes meaningful collaborations.

The issue is human choices, not technology. AI, telehealth, and genomics can exclude or empower. Dr. Mario Vaz of St. John's Medical College, Bengaluru, argues that including History, Bioethics, and Social Medicine can bridge contrasting disciplines. In *Humanities in Medical Education*, Rajiv Mahajan and Tejinder Singh call for deeper engagement with equity, culture, and scientific temper.

A new framework

Considering the Indian context and diverse viewpoints, we propose a five-module framework: a critical history of healthcare disparities to explore how caste, gender, class, and wealth shape healthcare solutions; illness narratives across cultures to engage with the differences in lived experiences of conditions like Alzheimer's and depression among elite patients and the underprivileged; communicating science in diverse contexts to prepare doctors to counter mis(dis)information and work across languages; an anthropology of healthcare technology that situates healthcare advancements in their social settings; and an ethics of healthcare technologies that weighs the consequences of tools such as AI and gene editing.

These modules must be rigorous and experiential and reinforced through fieldwork, outcome reviews, and work with advocacy groups, with patient voices at the centre. When implemented effectively, it equips doctors to confront science and stigma and to join global conversations linking medicine, anthropology, ethics, technology and democratised access to healthcare.

Health Humanities must move beyond English departments and become an integral part of medical colleges, where Humanities scholars can work in tandem with medical practitioners. This integration can help India produce clinicians who heal disease and discrimination and repair rifts between science and society, technology and humanity.

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OFF THE EDGE
Nandini Raman

Gain experience

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

I finished B.Tech in Chemical Engineering (8.5 CGPA) and have three years experience across EPC, oil and gas valve manufacturing and the automobile sector. I don't know what my niche is or how to grow into higher positions. I like to communicate and travel. Is there any course that is not too expensive that I can do? Saravana Kumar

Dear Saravana,

Have you considered moving into a Sales/Business Development role? It needs communication skills and, depending on the industry, you could be literally living out of a suitcase.

With your credentials and experience, you could explore project management, field engineering or supply chain (technical procurement) management.

To identify your niche, self-assess and think about your past roles, What did you enjoy the most? Speak to your previous bosses and current manager and identify your strengths. Network with people on LinkedIn and send a connection request to people who inspire you and ask for a 15-minute chat to learn about their career path.

Depending on what you shortlist as a career shift plan, you can choose to work on specific certifications that are cost-effective and will provide you with credentials that will help you pivot.

An Executive MBA is a one-stop shop for most of the roles. Choose the specialisation according to your niche.

Develop software skills like Advanced Excel + SQL + Data Visualisation (Power BI/Tableau). These are invaluable in every industry.

I have completed the B1 level in German. To be a teacher of "German as a foreign language", what are the courses I should pursue? Simran

Dear Simran,

B1 level is a solid foundation. However, to become a professional German teacher, you need to advance your language skills significantly and acquire formal teaching qualifications. Most employers and certification bodies require minimum C1 (Advanced) proficiency and C2 (Mastery). Pass the Goethe-Zertifikat C1 and then aim for C2 (Großes Deutsches Sprachdiplom). From the Goethe-Institut, consider the DUF (Deutsch Unterrichten Fürs) specifically designed for German teachers and ZDaF (Zertifikat Deutsch als Fremdsprache), which is a certification to teach German.

Also, pursue formal teacher training courses to learn teaching methodologies. A Master's degree is necessary to teach at the university level. So, consider a Master of Arts in German as a Foreign Language or Applied Linguistics. You will need a C1 certificate (like TestDaF or DSH) to get admission.

In India, many central universities (like JNU, Delhi University, University of Hyderabad, EFLU Hyderabad) offer Master's programmes in German that include pedagogy modules.

Start gaining experience once you sign up for your teacher training course. Taking tuitions for A1/A2 level students is the best way to apply your learning. Or seek part-time roles as a teaching assistant in language institutes.

I am in Class 11 and passionate about two fields: computer science and space science. What should I do to pursue a career in space science? Is a career in this field realistic or should I focus on CS? Mina

Dear Mina,

Computer Science and Space are connected given that software is used to control a rover on Mars, and algorithms to process data from a telescope and so much more. The standard path in India for core research and development of space science and technology is through engineering. Consider a B.Tech or B.E. in Electronics and Communication Engineering (ECE), Aerospace or Aeronautical Engineering, Mechanical Engineering, Computer Science and Engineering.

Admissions for top colleges such as the IITs (Bombay, Kharagpur, Madras and Kanpur have strong Aerospace programmes) or IIST Thiruvananthapuram is through JEE Advanced rank.

You can also explore the Pure Science route, which leads towards research, theory, and data analysis. A B.Sc. in Physics, Astronomy, Astrophysics, followed by an M.Sc. and then a Ph.D.. in the IISc-Bengaluru or the IISERs, IITs will be via the CUET or institute-specific exams.

A career in Space Science is no longer restricted. Apart from ISRO and NASA, there are opportunities with ESA (Europe), JAXA (Japan) and Roscosmos (Russia) and private space companies.

I completed a B.Sc. in 2024 with a 9.25 CGPA and was preparing for the defence exams. Despite two attempts, I have not been able to clear them. I have been at home all this time and am losing confidence. How can I stay focused? Harshata

Dear Harshata,

First, regain your confidence. Self-analysis should not become a loop of frustration and low motivation. Think beyond the defence forces and see what you would like to explore. Beyond the CDS, consider AFCAT, ICG, SSC-Tech and other exams that may match your B.Sc. background. There are many stages after the written exams such as the medical and SSB, which may also be a block. Have you tried joining a dedicated coaching programme? That would help. If the SSB is a hurdle, identify a senior ex-armed forces officer who can help prepare for the GTO tasks and interview practice. Practise speaking clearly and concisely. Get involved in group activities (sports, volunteering) to subconsciously build your group dynamics skills.

Explore Plan B. Your 9.25 CGPA is a golden ticket. Prepare for M.Sc. Entrance Exams. It will open doors to research, PhD, lectureship, and corporate jobs. Explore other government exams that are prestigious and offer secure careers.

If you still feel lost, meet a career counsellor who can help you navigate this and work with you on identifying other prospective careers.

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.

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More than academic tinkering

If India is to be a Biotechnology leader, higher education must evolve to develop leaders who can address problems that cut across the laboratory, the marketplace, and society

R Shivakumar

The 21st century is undeniably the era of biology. The BIO-E3 policy – Biotechnology for Economy, Employment, and Environment – puts innovation at the centre of development. While the opportunities are vast, the country's capacity to lead in biotechnology rests on its capacity to educate, inspire, and prepare the next generation of innovators.

Beyond domain knowledge

Biotechnology today demands not just domain knowledge but also creativity, ethics, and transdisciplinary thinking, as tomorrow's science will evolve at the intersection of Biology and Artificial Intelligence (AI), Chemistry, Data Science, Sustainability and Engineering.

Indian universities are finally starting to mirror this reality. We now have B.Tech. and M.Sc. programmes that combine Biotechnology with Computational Sciences, Environmental Engineering, and even Policy and Economics. These are not merely academic tinkering but strategic moves to develop leaders who can address problems that cut across the laboratory, the marketplace, and society.

India's biotech future cannot be constructed in silos in its metropolitan centres. Talent lies in all corners of our nation, from industrial parks to rural heartlands. With over 1,300 biotechnology schools in India, access to STEM education has now extended to students from smaller cities, many of whom bring with them new ideas based on their lived experiences. The more perspectives and voices we bring into the innovation process, the stronger and globally applicable our biotech solutions will be. That is why we need to keep investing in labs, faculty, and digital infrastructure that can enable talent from everywhere to compete and work together on a global platform.

Ethical dilemmas

Biotechnology holds great promise but also has its ethical dilemmas. Gene editing, cloning, and customised medicine hold out unique possibilities but also have moral issues. If we are to lead the world, we need to lead responsibly. Hence, Bioethics needs to stand side-by-side with Biology. It is not enough if our graduates ask, "Can we do this?" They need to be able to ask "Should we do this?" The leaders we educate need to be as confident in their ethical decision-making as they are in scientific ability.

India's path to emerging as a world biotech leader by 2047 will not be shaped merely by capital deployment or technology uptake. It will be shaped by the individuals who propel it. Our role as educators is to cultivate visionaries, not merely workers; pathfinders, not merely practitioners. To do this, we require greater industry-academic collaboration, more profound global research linkages, and an education system that prizes inquiry as well as compliance. We must prepare our young people with the technical tools to invent and the resilience to ride through a world changing at lightning speed.

The biotechnology industry is a strong lever for India's economic development, international position, and social advancement. But the lever is as good as the hands that use it. Education is the force that will equip India with the talent, values, and vision to drive the world into the biotech century. As we stand at this inflextion point, the call is clear: we need to build education ecosystems bold in ambition, rich in opportunity, and unrelenting in integrity of innovation.

The writer is Chairman of SRM Group of Institutions, Chennai - Ramapuram and Tiruchi.

Beyond the degree

What international students need to know about the U.K. job market

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Mathew Howard

Studying in the U.K. is an exciting decision for international students but what many are unaware of is that employment in the U.K. starts as soon as they arrive and doesn't stop when they graduate. Learning about timelines, cultural quirks, and expectations early can help students who want to land graduate positions, internships, or skilled part-time jobs. Here are some important takeaways and useful tips:

Early bird advantage: A common misconception is that job hunting begins in the final months of study. In reality, many global employers – especially in competitive sectors like finance, consulting, and engineering – begin advertising roles up to a year in advance. If you're enrolling in a one-year Master's programme, application windows for graduate schemes may open within weeks of your arrival. Start preparing as early as possible: update your CV, research companies, and investigate application deadlines even before your course begins.

Personalise CVs: Unlike in some countries where a single CV works for multiple roles, employers in the U.K. expect tailored applications. A generic CV and cover letter will rarely get you through to the interview stage. Focus on quality over quantity. Customise each application to reflect the specific job description. Use clear, concise examples and show genuine motivation for the role. Don't be afraid to include aspects about your personality cleverly. Employers appreciate authenticity and self-awareness just as much as qualifications.

Transferable skills: Many international students emphasise academic performance. While strong grades matter, employers often seek a well-rounded candidate. Experience gained through skilled part-time jobs, volunteering, participation in student societies, or side projects builds valuable transferable skills like leadership, teamwork, and time management. These are just as critical to success in the workplace and should be highlighted confidently on your CV and during interviews.

"Hidden job market": Not all job opportunities are advertised in obvious places. In fact, a large number of roles – especially in startups, SMEs, and niche industries – exist in the hidden job market. To access these, students need to proactively network. Attend university career fairs, reach out to alumni on LinkedIn, join professional groups, and speak with your lecturers or industry guest speakers. The more visible you are in relevant spaces, the more likely you are to come across unexpected opportunities.

Speak the employer's language: Terms like "commercial awareness" or "cultural fit" can feel vague or even intimidating but understanding how to translate your experiences into employer-relevant language is key. For example, your experience managing a university club budget could demonstrate financial literacy. Helping peers from different backgrounds might reflect cross-cultural communication. The ability to clearly and confidently connect your story to a company's business needs sets you apart.

Navigating interviews: Interview formats in the U.K. are rapidly evolving in the AI era. From traditional panel interviews to AI-recorded video responses and gamified assessments, students must be prepared for a range of situations. Practising with AI tools for mock interviews can help familiarise you with newer formats. However, it's also important to sharpen your interpersonal skills through live mock interviews and feedback sessions. Understanding when and how to use GenAI ethically and effectively for CV reviews or preparation can give you an edge.

Build a support system: One of the most underused assets among international students is the career support ecosystem available to them. Careers advisors, peer mentoring programmes, alumni networks, and online platforms can help you succeed. Most universities provide ongoing access to career services, even after graduation. From LinkedIn Learning and job portals to one-on-one coaching, these tools support your development beyond your time on campus.

Real-world experience: Every bit of experience counts. Whether it's a student consultancy project, a short internship, freelance work, or community volunteering, real-world exposure builds confidence and enhances employability. Students who thrive often do so by layering experiences; combining academic study with relevant part-time jobs, industry projects, and consistent networking. Employers value candidates who can show growth, initiative, and a willingness to engage with the working world in practical ways.

Employability isn't just about ticking boxes. It is about being curious, intentional, and proactive. The earlier you begin building your professional profile, the better equipped you will be to seize opportunities when they arise. Your time in the U.K. is more than the degree. It's your chance to build a global career-ready identity that reflects who you are and where you are headed; a journey that starts long before you submit your first job application. So, whether you're heading to London, Manchester, or Glasgow, arrive with more than just your luggage. Bring your curiosity, ambition, and a plan to build your employability from the moment you land.

The writer is the Deputy Head of Careers Service at the University of Leeds, the U.K.

Not just a technician

Data science is not just about building models; it is about solving real-world problems, which requires more than just coding skills

Abhijit Dasgupta

In the rapidly evolving field of Data Science, technical skills such as programming, statistics, and machine learning are often emphasised as the foundation for success. However, while these are essential, they are not sufficient on their own. A successful career in Data Science also requires strong soft skills, business acumen, communication abilities, and ethical considerations.

Effective communication: One of the most critical non-technical skills for a data scientist is communication. Data scientists must translate complex analytical findings into actionable insights for stakeholders who may not have a technical background. A data scientist must explain results in simple terms, using visualisations and storytelling techniques to make data understandable. They must also collaborate with and work with their teams, business leaders, engineers and marketers, which requires the ability to convey technical details without jargon. Yet another useful skill is being able to write reports and document things clearly. This will ensure that analyses are reproducible and useful for future projects.

Business acumen: Technical skills alone cannot drive business value unless a data scientist understands the industry, company objectives, and key performance indicators (KPIs). They must identify which problems are worth solving and how data can provide solutions; assess whether a machine learning model or data analysis is worth the computational and financial cost; and have domain knowledge in fields like healthcare, finance, or e-commerce to frame data problems effectively. A data scientist who lacks business awareness may build technically impressive models that do not align with the company's strategic goals.

Critical thinking: Data science is not just about applying algorithms. It also requires logical reasoning, creativity, and adaptability. Not every problem requires deep learning. Sometimes a simple regression or heuristic works better. So the ability to choose the optimal approach is crucial. Next, when a model underperforms, the data scientist must be able to diagnose why. Was it data quality, feature selection or bias? Another key requirement is the ability to handle ambiguity. Real-world data is messy and assumptions must be constantly questioned. Critical thinking ensures that data scientists do not blindly rely on tools but instead apply them thoughtfully.

Teamwork: Data science projects are rarely solo endeavours. Professionals must work with engineers, product managers, designers, business executives and others. Collaboration requires empathy, conflict resolution, and adaptability ... skills that go beyond coding.

Ethical considerations: As Data Science influences industries like healthcare, finance, and law enforcement, ethical implications become crucial. Models trained on biased data can perpetuate discrimination. Handling sensitive data requires compliance with regulations and GDPR and being aware of privacy concerns. Being transparent is important, as stakeholders should understand how models make decisions.

A data scientist must consider societal impact, not just model accuracy. The best data scientists combine technical expertise with these broader skills to drive meaningful, responsible, and impactful decisions. Data science is not just about building models; it's about solving real-world problems. To do that effectively, one must be a strategist, communicator, and ethical thinker, not just a technician.

The writer is the Director of the Bachelor of Data Science programme at SP Jain School of Global Management.

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THINK
Aruna Sankaranarayanan

Lost in the scroll

Paying attention is exponentially hard in a digital world as we are fed a continuous diet of 'brainrot.'

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Even before digital devices fragmented attention spans, teachers exhorted students to "Pay attention". When I was in school, in the 1970s and 1980s, teachers would use this phrase, sometimes banging on a desk with a wooden duster, to get our attention. The use of the verb 'pay' suggests that we have always perceived attention as a scarce resource, not to be frittered away. However, over the last decade, as gadgets made deeper inroads into our everyday lives, there is a growing recognition that our attentions are being parcelled and monetised, often leaving individuals distraught and dismayed. Is it possible to regain control of our attention spans?

Attention, like many other psychological phenomena, is hard to define. Even without the tug of social media, we are bombarded by a plethora of sensations, only a fraction of which may be relevant to us in a given moment. Though the term 'attention' is used as if it's a "single entity," in *Altered Traits*, Daniel Goleman and Richard Davidson posit that it actually consists of a set of abilities that includes selective attention, vigilance, goal focus and meta-awareness.

Paying attention is hard work in the analogue world. However, it becomes exponentially harder when we are fed a continuous diet of digital 'brain rot'. Social media platforms are designed to lure our flickering attention only to fill our heads time and again with largely banal stuff. An article in *The Economist* (dated September 13, 2025) likens this to a form of 'theft' because when we direct our attention to our device, it prevents us from engaging in something else, which, in turn, can dampen our productivity. Because attention is controlled by both voluntary and involuntary mechanisms, tech companies take advantage of the latter to keep us scrolling endlessly.

Two types of ADHD?

In an article in *Psyche*, three psychiatrists, Paul Kudlow, Karline Treunicht and Elia Abi Jaoud observe that the incidence of attention-deficit hyperactivity disorder (ADHD) has mushroomed in both children and adults over the past two decades. Further, they argue that the disorder has morphed and the condition is more akin to a spectrum with two extremities that they refer to as Type I and Type II ADHD. As our ability to pay attention is determined by both biological and environmental factors, most of us "fall somewhere between these two poles.""

According to the psychiatrists, Type I ADHD is the "classical form" which typically manifests in early childhood as a "neurodevelopmental condition". Given appropriate support either in the form of a structured learning environment or stimulant medication, most children with this form of ADHD get better with age. However, of late, the psychiatrists have been encountering a subset of patients who show a different profile. They don't necessarily have problems staying focused as children. However, in their teens or 20s, they start exhibiting a lack of focus, impulsivity and disorganisation though they weren't like this earlier. The authors posit that Type II ADHD possibly results from countless hours spent scrolling and swapping screens. Brains then get rewired, predisposing them to continually crave instant gratification. As a result, people find it difficult to engage in tasks that require a slower but deeper and more deliberate form of engagement like reading a book or listening to a lecture.

The psychiatrists add a caveat that most studies regarding digital usage and symptoms of ADHD are correlational. However, the preliminary longitudinal evidence that exists suggests that heavy digital reliance precedes the onset of symptoms of inattention and impulsivity. According to the authors, the most effective treatment might be to curb digital usage to "deliberate windows" of short durations and engage in offline activities that enhance focus.

As early as 1890, William James notes in *Principles of Psychology* that the skill of repeatedly redirecting a meandering mind is "the very root of judgment, character and will". Given how consequential attention is, everyone, regardless of whether they show signs of ADHD, can benefit from reducing mindless scrolling .

The writer is visiting faculty at the School of Education, Azim Premji University, Bengaluru, and the co-author of Bee-Witched.

Firewall the future

How educational institutions can build a strong cybersecurity culture

Ashok Kumar Thavani
Andu

With the rise of digital transformation, higher education institutions have increasingly moved their teaching, administration, and research activities to online platforms. While this shift has broadened access to education and enabled global academic collaboration, it has also opened the door to a host of cybersecurity threats. Universities and colleges today must guard against a variety of cyber risks, including ransomware, data leaks, identity theft, and intellectual property breaches – challenges that require robust security solutions.

To protect their digital infrastructure, many institutions now implement cutting-edge cybersecurity frameworks. A leading strategy is the Zero Trust Architecture, which mandates continuous authentication of users and devices, ensuring that access is restricted at every point. Emerging technologies assist in identifying suspicious behaviour on networks, forecasting potential attacks, and automating protective measures. Additionally, blockchain is being used more frequently to maintain transparency and integrity in academic records, research findings, and institutional data.

Ensuring data privacy depends on stringent protective mechanisms. Tools like multi-factor authentication (MFA) and advanced encryption algorithms are essential for safeguarding sensitive information. As cloud adoption grows within the academic sector, securing these cloud-based environments becomes even more critical to institutional resilience.

Dynamic approach

Cybersecurity education must be a continuous effort. A one-time seminar is insufficient; instead, dynamic learning methods including interactive simulations, scenario-based training, and gamified assessments help reinforce awareness and comprehension.

Effective training should be tailored to accommodate the varying levels of technical knowledge across campus populations. While general awareness programmes might cover basics like password hygiene, specialised modules can focus on in-depth topics for IT professionals. Fostering open dialogue around security concerns allows for a supportive learning environment.

Building a strong cybersecurity culture requires shared responsibility. Consistent messaging through digital newsletters, awareness drives, and cyber committees helps maintain a security-first mindset. Rewarding proactive behaviours and enabling anonymous reporting mechanisms encourage broader participation and accountability.

Embedding cybersecurity practices into daily routines transforms them from mandatory policies into shared values embraced by the community. This collective approach fosters vigilance, reduces potential threats, and promotes the development of informed digital citizens.

Hands-on learning plays a vital role in preparing for real-world cyber incidents. Virtual labs and simulation platforms offer learners the chance to identify and mitigate threats in lifelike scenarios. Competitions like Capture The Flag (CTF) and gamified exercises enhance competencies in fields like cryptography, threat detection, and system defence.

Many universities have incorporated professional certifications such as CompTIA Security+ and CISSP into their curriculum, empowering students for cybersecurity careers. The establishment of Security Operations Centres (SOCs) on campuses provides real-time threat monitoring and rapid response capabilities. Programmes like hackathons, industry collaborations, and apprenticeships further strengthen practical skills and innovation in the field.

These concerted efforts collectively contribute to building strong cyber resilience in academic environments.

Continuous learning and close industry collaboration further reinforce this ecosystem, ensuring sustained trust and protection. Faculty members also gain from Massive Open Online Courses (MOOCs) and role-specific training on topics such as data privacy regulations and incident response.

Engaging with cyber clubs, professional associations, and policymaking initiatives helps strengthen institutional readiness.

In essence, securing the future of academia extends beyond deploying advanced technologies; it depends on cultivating a well-informed, proactive, and security-conscious campus community.

The writer is Professor and Director, School of Science and Computer Studies, CMR University, Bengaluru.

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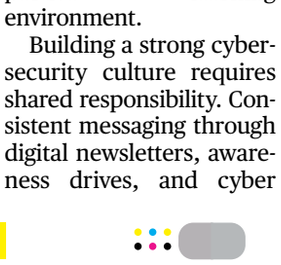

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