Monday, April 1, 2024
CHENNAI

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A game changer

The initiative to establish off-campus centres by specific higher education institutions has the potential to offer quality education to a larger number of students

R. W. Alexander Jesudasan

To accelerate higher education globally, many foreign universities establish offshore campuses with the assurance of the same quality of education and services offered by the parent institution. A similar concept is the off-campus centre, established by an institution in a nearby locale to give the youth access to quality education.

In June 2023, the University Grants Commission (UGC) released a gazette notification opening the doors for Deemed-to-be Universities that have been declared institutions of academic excellence to establish off-campus centres under the regulations of the statutory body. Institutions that were declared Deemed-to-be Universities before the UGC regulations of 2023 have to amend their Memorandum of Association (MoA) and other rules within a year.

GETTY IMAGES/ISTOCKPHOTO

Eligibility

Deemed-to-be Universities that have been ranked in Grade A or above by the National Assessment and Accreditation Council (NAAC) and are in the 1-100 bandwidth in the National Institutional Ranking Framework (NIRF) and been designated as Category I and II institutions by the UGC are eligible. Such an institution can also convert an affiliated college under the same Society, Trust or Company into an off-campus centre by getting a no-objection certificate (NOC) from the statutory body. However, the centre has to be administered as a constituent institution of its parent body. This includes admissions, faculty recruitments, teaching and evaluation and conferring of degrees. The parent university has to submit an MoA and Letter of Intent (LoI) to the UGC, which will present it to the Government for approval.

Establishing off-campus centres will also allow the youth in the area to continue their education in their home base and avoid the inconvenience of having to travel to far-off places

Requirements

The off-campus centre should offer at least five UG or PG or research programmes or a combination of the three. It should have a strength of minimum 1000 students of which one-fifth should be PG or research scholars. When the centre begins, it should have at least 50 faculty members. This number can be enhanced by recruitment depending on the new programmes begin and the number of students admitted. Programmes or courses in any field offered by the parent university and approved by the Executive Council can be offered in the off-campus centre also.

Infrastructure

A minimum area of five acres of land and minimum space of 30sq.m. per students is required to set up an off-campus centre. The infrastructure, including classrooms, laboratories, workshops, auditoriums, hostels, canteens, guest houses and so on, has to be in accordance with the norms and standards specified by the UGC.

Benefits

With the procedure to establish an off-campus centre being fairly simple and straightforward, the parent universities can transform existing dysfunctional institutions and save costs. This will also allow the youth in the area to continue their education in their home base and avoid the inconvenience of having to travel to far-off places. Fee concessions and scholarships will also help students in rural areas.

With the necessary approvals, the off-campus centres can offer novel programmes in Econometrics and Data Science, Applied Biotechnology, Health Care Management, IoT, Artificial Intelligence and Machine Learning, Web Designing, Digital Marketing, CRM, Fine Arts, Game Art and Animation and VFX.

With many Deemed-to-be Universities getting ready to establish off-centre campuses, it is likely that many students from the coming academic year will benefit from this new initiative.

The writer is the Pro Vice-Chancellor, Hindustan Institute of Technology and Science (HITS) Deemed-to-be University, Chennai

SCHOLARSHIPS

National Disaster Management Authority Internship Scheme
Eligibility: Open to recent graduates of a postgraduate degree programme in Disaster Management, Development Studies, Economics, Humanities, Sciences, Management, Engineering, Health Studies and so on.
Rewards: ₹12,000 monthly
Application: Online
Deadline: Round the year
www.b4s.in/edge/NDMS3

Bhumi Fellowship Programme in India
A two-year, full-time paid programme to provide hands-on training and experience in transforming schools in India.
Eligibility: Open to individuals between 20 and 30 years with a degree in Social Work, Education, or Engineering, who are willing to commit two years and are either based in Chennai or are willing to relocate.
Rewards: ₹25,500 monthly and other benefits
Application: Online
Deadline: May 30
www.b4s.in/edge/THBF5

University of Birmingham India Chancellor's Scholarships
Eligibility: Open to Indian students who have accepted an offer for a full-time PG programme at the institution and meet specified academic conditions, are capable of paying tuition fees not covered under the scholarship and have funds to cover full cost of living in Birmingham.
Rewards: £4,000 (one time)
Application: Online
Deadline: May 31
www.b4s.in/edge/UCBD1

Courtesy: Buddy4study.com

SheLeads Competition

Education New Zealand | Manapou ki te Ao SheLeads series presents the SheLeads Video Essay Competition. Students should submit a video (not more than three minutes and in landscape orientation) of themselves talking about "Breaking Barriers: Strategies for Achieving Gender Parity in Education by 2030 in alignment with SDG 4". This involves identifying current challenges, innovative educational practices or policy solutions and role of collaborations and partnerships. The video essay cannot contain slides, graphics, or visuals with a voice over.

Eligibility: Undergraduate students from India.
Last date: April 15
https://bitly.ws/3gYFn

OFF THE EDGE
Nandini Raman

Stay persistent

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

I completed B.Sc. Biotechnology in 2020. I don't have a job or financial security. I plan to do a course in medical coding alongside preparing for government exams. What more can I do? Mohan

Dear Mohan,

Network to connect with professionals in your field through networking events, LinkedIn, and other platforms to gain insights, mentorship, and potential job opportunities. Explore online freelancing platforms such as Upwork or Freelancer for part-time opportunities for additional income and work experience. Build your resume, and identify other skills that are in demand in your field. Upskilling can make you more competitive in the job market and online platforms offer a variety of courses in areas like data analysis, digital marketing, and project management. Develop a professional online presence through LinkedIn to showcase yourself and attract potential employers or collaborators. Stay persistent and remain open to new opportunities. Seek guidance from career advisors who can provide personalised plans. Work on a budget and plan your finances to manage your expenses effectively. Prioritise your health and well-being.

I have two years of work experience in a public sector bank but want to go in for higher studies abroad or in India. Should I opt for an online MBA or a two-year PGDM or an Executive MBA? Jatin

Dear Jatin,

The MBA course you want to do depends on factors such as career goals, current work experience, availability of time, finances and personal circumstances. An Online MBA offers flexibility, (hopefully) allowing you to study while you continue to work. It is also cost-effective compared to a full-time or an on-campus programme. However, the question is whether it offers the networking opportunities and level of interaction with classmates and professors that a traditional programme does. A two-year PGDM is a full-time, on-campus, comprehensive and immersive learning experience. This will provide the depth of knowledge needed for a successful transition and also offer extensive networking opportunities with peers, faculty, and industry professionals. An Executive MBA is designed for those with several years of work experience who learn by contributing to class discussions. You will need to balance work and study hours. They also attract professionals with diverse backgrounds providing valuable networking opportunities. Before deciding, work on a cost-benefit analysis for each choice against your career goals, current finances (tuition, living expenses, loss of income during the programme), networking opportunities, current work experience and current family commitments. Speak to people who have done such courses and understand the pros and cons to make an informed decision.

I completed Bachelor's in English Language and Literature but am not interested in teaching. What are my job options? Balagopal

Dear Balagopal,

You could consider becoming a content writer or an editor for companies, marketing agencies, websites, blogs, and social media sites. Or a technical writer and produce documentation, manuals and guides for products and services. As a PR specialist, you will be responsible for the public image of individuals, companies, and organisations through media relations and strategic communication. Other options include being a social media manager, a marketing coordinator, a HR specialist, an editorial assistant/associate, a publications coordinator, a grant writer, a market research analyst, an event coordinator, a media analyst, or freelance author. You will need to work on your resume and cover letter to highlight your specific skills and experiences relevant to the job/s that you apply for.

I am doing B.A. Economics but don't know what to pursue for higher studies. I'm looking for a job with a good income to financially support my family. I am interested public service. What should be my career path? Sai

Dear Sai,

Research each option thoroughly, consider the qualifications required, and assess how well they align with your skills, interests and long-term goals. Gain practical experience through internships and volunteering opportunities to strengthen your profile. You could take the Civil Services Exam to become an officer in the Indian Administrative Service (IAS), Indian Police Service (IPS), or Indian Foreign Service (IFS). This is a prestigious and challenging career in public service. Alternatively, you could take the State Public Service exams for roles such as Deputy Collector, Deputy Superintendent of Police, and so on. You could also become an economic advisor/analyst in government departments or get into public policy analysis. Or be a research analyst in research institutes, an urban and regional planner or work in the non-profit sector. Consider working with international organisations like the United Nations (UN), World Bank, or International Monetary Fund (IMF), or become an environmental economist, a public finance analyst or a social services manager. A health economist, an educational policy analyst and an international relations specialist are also options.

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

Seamless connections

With technology being a crucial aspect of education today, institutions need to use the right strategies to provide an always-on learning environment

Prakash Krishnamoorthy

Today, technology has become a key enabler across the education sector. However, the IT teams who play a vital role in delivering it continue to face hurdles in bringing their organisations up to scratch and maintaining their digital advantage.

Challenges

Connectivity demands: Across all levels of education, digital devices are proliferating both in the classroom and among students and staff. All these endpoints, therefore, need to interact seamlessly with each other to create smarter learning environments. This puts immense pressure on the networks, both in terms of ongoing performance and maintenance. Therefore, ensuring appropriate bandwidth to manage increased traffic, support higher device densities, and enforce access policies automatically is essential.

Data-driven decisions: To improve resource allocation for student success, institutions are turning to data-informed decision-making to increase enrollments, transform academics, and improve graduation rates. As networking infrastructure continuously collects user and device behaviour data, it can be an institution's most comprehensive data source.

Cybersecurity: With students, faculty, and staff regularly accessing resources and systems through digital devices, the potential for cybersecurity attacks is high. Today's threats may not just involve criminal activities, but also unintentional sharing of user credentials internally or inadequate security practices by suppliers.

Digital equity: With the pandemic and other societal forces spotlighting disparities in access to technology, education institutes are working to address digital equity in various ways. Unsurprisingly, wired and wireless networking infrastructure plays a critical role in closing the digital divide.

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Success strategies

The cornerstone of facilitating students' academic achievements for IT departments commences with network management, emphasising the continual improvement of network efficiency and security. Numerous key technologies and strategies can provide the right set of advantages:

AIOps: Artificial Intelligence for IT Operations or AIOps provides AI-powered insights to facilitate network troubleshooting and optimisation, workflow automation, and endpoint profiling for enhanced security. Automating these tasks can help IT departments optimise their time and resources, enabling them to pursue higher-value strategic tasks.

NaaS infrastructure: How does an IT team deliver seamless, secure, always-on connectivity while minimising the financial impact? They should consider a network-as-a-service (NaaS) model, which can accelerate an organisation's modernisation while consuming minimal resources or budget, as it is flexible and easily scalable.

Cloud-managed location awareness: Achieving institutional objectives around data-driven decision-making requires IT teams to solve several challenges such as collecting, storing, and accessing data, obtaining actionable insights, and maintaining data privacy. However, advanced networking solutions can help by allowing the gathering of utilisation data and including highly accurate location awareness for collecting situational information. This is further analysed in the cloud for fast on-demand access.

Security: To secure data in complex academic environments, educational organisations must go beyond a perimeter-based firewall and deploy networking solutions with security engineered into every aspect of their wired, wireless, and WAN infrastructure. This involves using Zero Trust and secure access service edge (SASE) frameworks, which provide stronger defence across an entire IT stack, including users, connected devices, applications, network services, compute, and storage platforms. A Zero Trust network can automatically determine what devices are being connected and provide the appropriate level of access control based on preordained policies.

Thus, regardless of the priorities, modernising networking infrastructure is a vital for an educational institution to provide its students, faculty and others a secure, seamless, connected, and always-on learning environment.

The writer is Director - India at HPE Aruba Networking.

SAVE THE DATE

Admissions open

Ben-Gurion University of the Negev (BGU), Israel, invites applications for its two-year M.Sc. programme in Mechanical Engineering. The programme offers two tracks: a thesis-based research one and a general one without a thesis, all in English.
Eligibility: B.Sc. Mechanical Engineering or a closely related field from an accredited institution with a minimum GPA of 80/100 according to the Israeli grading system. A TOEFL score of at least 85/120 or equivalent in an internationally recognized English proficiency exam. ThIS requirement is waived for applicants who received their B.Sc. degree in English. GRE is recommended but not required. An international applicant should contact a potential advisor from the Department of ME before applying. Details at the Research Portal (https://cris.bgu.ac.il/)
https://bitly.ws/3gYIx

MIT World Peace University (MIT-WPU), Pune, has opened registrations for the MIT-WPU Common Entrance Test (CET) 2024-25 for over 60 UG and PG programmes.
https://mitwpu.edu.in/

Make the right choice

What do medical students need to consider when looking at a postgraduate programme abroad?

Balu Ramachandran

For students of medicine, a postgraduate programme is crucial both in terms of career progression and honing one's existing skillsets and knowledge. Many medical professionals often opt to do a postgraduate programme abroad.

Preferred destinations include the U.S., the U.K., Canada, Australia and New Zealand.

However, this involves taking exams such as the USMLE and PLAB (mandatory for the U.S. and the U.K. respectively), which not only involve considerable effort but also substantial expense.

As a result, many students choose economically viable alternatives like China, Russia, Ukraine among others. Here, the language barrier not only impedes effective patient interaction but also diminishes the overall learning experience. Also, variations in disease patterns, treatment protocols, and medical practices in these countries may compromise the ability to practice effectively in India. Therefore, meticulous consideration is imperative before committing to such a course.

Apart from academic considerations, one also needs to assess cost of living, visa requirements, adapting to a new culture and society and the chances of pursuing a medical career after course completion. Here are some key factors that medical students should consider before they choose a PG programme abroad.

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Career goals
Take a moment to introspect and define your aspirations and goals. Talk to people in the field and research the intricacies of the various specialities available. Ensure that you choose a field that aligns with your long-term aspirations.

Specialisations
With a diverse range of specialisations available, explore those that resonate with your interest. Also consider which ones will help you develop into well-rounded medical professionals. Look into which courses are based on emerging healthcare trends.

Evaluate accreditation
Global recognition of the qualification hinges on the programme's accreditation. Ensure that the course you have chosen is accredited, as this offers a professional standing and also opens doors to opportunities. If you are coming back to India after your PG, see that the course you have chosen is accredited by the National Medical Commission (NMC).

Course structure
Length of the programme, its curriculum, delivery models (whether online or on-campus) are all crucial aspects for an enriching academic experience. You will need evaluate these aspects to ensure that they integrate with your professional needs and personal commitments.

Future prospects
Apart from considering how the course aligns with your goals, gauge its real-world impact before signing up. Talk to former students and professionals in the field. Check course satisfaction ratings and testimonials from fellow medical professionals who have opted for the course.

Admission
Be meticulous about checking criteria for admission and ensure you meet all the requirements and understand the process properly.

Support services
Assess the flexibility in scheduling and the availability of support services that create an environment conducive to your learning and growth.

Language requirements
If considering programmes offered in languages other than English, consider language proficiency requirements. Ensuring fluency guarantees effective engagement with the curriculum and patients, maximising the benefits.

Clinical exposure
If your chosen programme involves clinical aspects, scrutinise the level and quality of clinical exposure provided. This first-hand experience should align with your expectations and requirements and enhance your practical skills.

Scholarships
Explore options for financial aid options and scholarships. A strategic examination of the payment schedule will help plan your financial commitments effectively.

Technological resources
Evaluating the technological resources provided by the programme for access to cutting-edge tools and platforms. In today's digital age, the programme should keep you informed about the latest advancements in the field.

Research options
Explore research opportunities, delve into access available to state-of-the-art laboratories, publications, and ongoing research projects. All of this is crucial in nurturing curiosity and academic growth.

Cultural Flexibility
Learn about the society and culture of the place you are going to. Cultural differences can impact your overall learning experience. Choosing the right country and region, whether for a short- or long-term course, is pivotal for a holistic educational journey.

In an effort to make learning more accessible, many international universities now offer online PG programmes that meet global standards. These are also significantly cheaper than the on-campus counterparts. So, evaluate all options, define one's goals and conduct a proper research into the various aspects outlined before making an informed choice.

The writer is Founder and CEO, OC Academy

Driven by passion

The winners of the Tata Technologies InnoVent hackathon explain how they applied the complexities of Gen AI to design cars

SPECIAL ARRANGEMENT

Sudarmugi B.
Manojkumar V.

Car design is a complex process. Creating innovative and aesthetically pleasing designs while ensuring safety and regulatory compliance brings with it multifaceted challenges. In addition, it often demands substantial investments in design teams, tools and physical prototypes.

Our journey to the Tata Technologies InnoVent hackathon was a collaborative effort filled with research and brainstorming sessions. Named Team Rolex, we explored the transformative potential of Gen AI in automotive design, with the idea of enhancing engineering productivity and setting a new standard in automotive styling. This involved using Generative AI for design iterations, allowing users to provide design text prompts, optimising efficiency through automation, and providing a user-friendly interface. Among the 800 projects in the contest, ours stood our for automating car design using deep tech (Stable Diffusion Model).

Deep dive
In the virtual prototype demo round, we brought our theoretical concepts to life. The interest from Tata Technologies SMEs in our application for Stage 2 was critical as it challenged us to create software that lived up to our ambitious proposal. This stage was defined by intense experimentation, exploration of technologies, and constant learning, as we aimed to apply complex AI algorithms to practical automotive design solutions.

The emerging nature of Gen AI meant learning from scratch and pioneering its application in automotive styling. Our partnership with the Tata Technologies team was key in navigating these challenges. Their expertise and insights enriched our project, allowing us to refine our tool to meet real-world needs. Our software emerged as a transformative solution by reducing design cycle times and enhancing styling creativity and precision.

Looking back, we see our success as more than just winning a competition; it was about advancing the frontiers of automotive design with AI, embracing the unknown, and realising our potential through dedication and innovation. This experience has not only readied us for what lies ahead but has also deepened our belief in the power of innovation to turn dreams into reality.

The writers are students of Bannari Amman Institute Of Technology, Erode, Tamil Nadu.

Choose your medium wisely

THINK
Aruna Sankaranarayanan

Whether it's print or an audio book, how we imbibe information impacts how we process it.

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You have a one-hour commute to college. As you find it hard to read in a moving vehicle, you opt for an audiobook. But, instead of a novel, you decide to plough through a textbook available as audio. You listen to a chapter on political philosophy, trying to focus keenly. Later, in the evening, when you're writing a paper, you find that your memory of the content is rather sparse. Are you saving time by listening to audio textbooks on the bus or are you better off reading the chapter at home?

In an article in the online magazine *Psyche*, Janet Geipel and Boaz Keysar weigh the pros and cons of reading print versus listening to text. According to the authors, the modality through which we imbibe information impacts how we process it. When we hear text, we're more likely to process the information intuitively, wherein we make snap decisions based on our "gut feelings or instincts". In contrast, when we read text, we tend to engage with it more analytically, which entails "evaluating information" deliberately and diligently. In another study, the researchers found that people are more likely to "solve logic puzzles" when they read the text as opposed to hear the information.

To confirm whether it was the modality per se that impacted the results, the authors ensured that the text was presented on a screen in small chunks at a time so that participants couldn't reread content that was presented earlier. However, even when information was presented in this format, participants did better while reading as opposed to listening.

The authors speculate that, as children, we learn oral language naturally and easily, whereas reading requires formal instruction, "effort and practice". So, it's possible that these two modalities tend to tap "different brain processes from the very beginning". While we rely on both intuition and analytic thinking, we may opt for the former when we need to make lightning decisions and engage in the latter when considered responses are required. So, if you would like to process information deeply and deliberately, opting to read it is probably the more optimal strategy.

Common misconception
As we're discussing visual and auditory modalities, it's probably a good opportunity to debunk a myth that tends to pervade lay thinking. The idea that we have unique "learning styles" has been bandied about in the popular press so much so that people make statements like, "I'm primarily a visual learner", "My preferred learning style is auditory" or "I learn best kinaesthetically." Though the idea of learning styles is often spoken of in educational circles, the empirical literature doesn't support the theory.

In a report published in *Psychological Science in Public Interest* in 2009, Harold Pashler, Mark McDaniel and Robert Bjork argue that "there is no adequate evidence base to justify incorporating learning-styles assessments into general educational practice." While the construct of learning styles may appeal to a more inclusive ethos, the evidence does not support the idea that some students learn better visually while others do better aurally with the same content.

Rather, how we learn depends on what we're learning, avers Daniel Willingham, in *Why Don't Students Like School?* We all benefit from looking at a map if we want to understand the physical geography of a country, rather than simply reading or hearing a description of the physical features and their relative locations. Likewise, if we want to learn knitting, we have to do it kinaesthetically. Just watching others knit or hearing the steps they follow is not going to make us knitters. That said, we all stand to gain when a concept lends itself to multiple modalities. So, reading about the structure of a cell, watching a video and drawing the cell leads to more robust learning than relying on one modality alone.

The writer is the author of *Zero Limits: Things Every 20-Something Should Know and* blogs at www.arunasankaranarayanan.com.

In an exciting space

With new programmes and courses and industry-academia partnerships, the semiconductor industry in India is poised to grow exponentially

Suraj Rengarajan

The rise of the Internet of Things (IoT) and Artificial Intelligence (AI) are fuelling a new era of growth for the semiconductor industry. As India pushes to build a strong semiconductor industry, there is a need to ensure that engineering graduates are equipped with the necessary skills to cater both to the increasing demand for broad electronics expertise, as well as the niche talent required across the entire semiconductor value chain from design, manufacturing, and supply chain.

New initiatives
Around 300 engineering colleges in India have introduced chip and circuitry engineering programmes to nurture a skilled workforce for semiconductor testing and manufacturing, with a focus on very large-scale integration (VLSI). However, more is required to develop a talent pipeline for manufacturing to have a sustainable semiconductor ecosystem.

In February 2023, the All-India Council for Technical Education (AICTE) initiated two specialised training programmes for chip making and develop 85,000 semiconductor professionals by 2032. The India Electronics and Semiconductor Association (IESA) has announced an initiative to reach out to eligible candidates and nurture and connect them to prospective employers. The Electronics Skill Council (ESSCI) has a comprehensive set of skills from the vocational stage that addresses the needs of the semiconductor industry from design to manufacturing. The Electronic Industries Association of India (ELCINA) also leverages content from the National Programme on Technology Enhanced Learning (NPTEL) and Purdue University, which has agreed with the Government of India to advance workforce development, R&D, and industry partnerships in semiconductors.

Purdue University is also preparing to launch semiconductor programmes, between six and 12 months in duration, in collaboration with the India Semiconductor Mission (ISM), to upskill and train Indian students and profesionals. targeting Indian students and professionals. SemiX in collaboration with global players has re-launched a short-term course on semiconductor technology and manufacturing. Many of the Indian Institutes of Technology such as Bombay, Madras, Ropar, Gandhinagar, Hyderabad and Patna have already introduced courses in association with global experts to build awareness around semiconductor manufacturing and design and to bridge the gap between industry know-how and academic curriculum. Global semiconductor companies have established ongoing fellowship programmes and signed Memorandums of Understanding (MoUs) with institutes and universities in India to enhance training and develop a capable workforce for the domestic semiconductor ecosystem.

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Such industry-academia collaborations bring together the expertise, resources, and innovation of both entities to drive economic growth, foster technological advancements, and offer numerous benefits, including access to the right talent, R&D opportunities, problem-solving expertise, and knowledge transfer.

Career options
In the semiconductor industry, entry-level roles, such as semiconductor technicians and junior engineers, are typically filled by fresh graduates or those with limited industry experience. The mid-level positions of semiconductor design engineer and process engineer represents 15-20% of jobs and requires more expertise and experience. Senior positions - senior design architect, integration engineer, research scientist, and managers - comprise 10-20%. Certain jobs such as quality assurance and equipment engineers necessitate an Engineering degree with a specific specialisation.

India currently has a workforce of around 125,000 engineers who are engaged in diverse aspects of chip design and development. Across the various levels, there are approximately 8,000 open positions in the sector. Many international corporations have spoken about their intentions to invest in R&D centres, semiconductor plants, and packaging units. Thus the semiconductor industry, which encompasses designing, manufacturing, and testing equipment and devices, is an exciting space currently. Its dynamic nature necessitates continuous learning to stay updated on emerging technology and trends.

The writer is the Managing Director and Chief Technology Officer, Applied Materials India