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## Making smart study choices

Sunday Star, Malaysia



*Rethinking*  
**tertiary options**

In an AI era, students must focus on courses that build adaptable skills for evolving industry needs. > 4 & 5



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As students build future-ready skills, balancing interests with industry needs is key

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AS artificial intelligence (AI) reshapes industries, students today face a pressing question of what they should study to remain relevant.

The focus, education leaders say, should be on courses that build adaptable, future-ready skills that transcend disciplines. Universiti Poly-Tech Malaysia (UPTM) Institute of Graduate Studies lecturer and master's programme head Dr Syatila Che Saruji said as AI continues to evolve, the future belongs to those who can adapt, learn continuously, and apply their knowledge across different contexts.

"For students navigating this uncertainty, focus on building a strong foundation of skills, stay curious, and be open to change. "In the age of AI, it is not the degree alone that determines success, but the ability to evolve with the world," she advised.

She, however, emphasised that the starting point in choosing a course should be personal interest.

"Students should choose based on what they enjoy. When they are interested, they are more confident and motivated to excel," she said.

At the same time, she emphasised the importance of staying aware of industry trends, particularly the growing influence of AI.

"Some fields require AI, while others still need the human touch."

"Students must balance their interests with what the industry demands," she said, adding that rather than viewing AI as a threat, students must see it as an opportunity to enhance their capabilities.

Emphasising AI and emerging technologies, Universiti Teknologi PETRONAS (UTP) senior lecturer (industrial physics) and technopreneur Dr Syed M. Hafiz said exposure to these fields is essential for Malaysian graduates to

remain competitive globally, particularly in high-demand sectors like energy and sustainability.

These industries, he said, are undergoing rapid technological advancement and the global push for greener solutions.

"Students with AI and technical knowledge are very sought after – they are the 'hot' talent right now. We want our graduates to be at the forefront of that," he said. Yet, he cautioned against over-reliance on AI tools, as the ability to think critically, challenge assumptions and innovate remains uniquely human and highly valuable.

"AI is just a tool and if students simply accept what AI gives them without questioning it, they may get it wrong."

"What we want are graduates who can create, innovate and build new solutions, not just use existing ones," he said, adding that this distinction is what will keep humans relevant in an increasingly automated world.

### Blend of skills

Chining in, Management and Science University (MSU) engagement manager Sharul Azwan Hamdzah said institutions are progressively embedding skills such as critical thinking, digital literacy, communication and interdisciplinary learning into their programmes to ensure graduates are equipped for long-term success.

"MSU integrates future-ready competencies across all fields of study through its Personal Enrichment Competency courses. "Regardless of whether a student is in medicine, fashion, or accounting, they are exposed to basic AI knowledge."

"It may not be at a professional level, but it ensures that every student understands what AI is, the fundamentals of it, and how it fits into their

field," he said. He added that this integration must also go beyond the classroom.

"Nowadays, teaching methods are evolving, with both students and lecturers trained to use AI in learning and administrative processes."

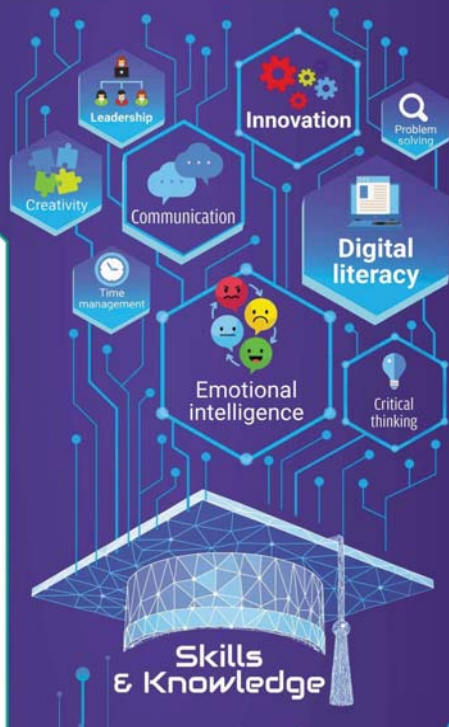
"We want to make sure not just students, but also our staff are AI-ready," he said, adding that educators continually learn from students, many of whom come with strong digital exposure. However, he stressed that technical knowledge alone is not enough and soft skills remain critical in an AI-driven world.

"Communication, leadership and adaptability, which are often developed through extra-curricular activities, are equally important. "Communication is not just about public speaking; it includes written communication, teamwork, and how you manage real-life situations like organising events or handling stress," he said, adding that these are the skills that will differentiate graduates.

Noting that adaptability is closely linked to how students are trained during their academic journey, Syatila said UPTM embeds elements like communication, leadership and problem-solving into both core and elective subjects.

"These skills are essential because they are relevant across all industries. We want our students to be well-rounded, not just technically capable. "We are preparing students not just for current job descriptions, but also for roles that will emerge in five to 10 years," she said.

Note: The academics were speakers and representatives of their respective universities at The Star Education Fair 2026, held at the Kuala Lumpur Convention Centre (KLCC) from April 11 to 12. The second fair is ongoing in Johor this weekend, ending today. Subsequent fairs will be held in Putrajaya and Penang in May. For details, visit @stareducationfair on Instagram or email education@thestar.com.my.



## Weighing options

There were several key takeaways from the fair at KLCC as I explored tertiary courses I hope to pursue. One of my main considerations was local universities such as Universiti Malaysia (UM), which I hadn't seriously considered before. These universities offer majors directly aligned with my interests, such as international relations, politics and global studies. Combined with the significantly lower cost compared to studying abroad, this has made pursuing my studies in Malaysia feel far more attractive and realistic.

I also gained valuable insights from speaking to experts and attending talks at the fair. At UMatch, one of the booths, I discovered alternative application pathways beyond the usual routes like UCAS (Universities and Colleges Admissions Service) for the United Kingdom or Common App for the United States. For instance, International Year One programmes offer separate application processes – something I hadn't been aware of.

On the financial side, I also learnt about the wide range of funding options available in Hong Kong, including support from both universities and the government. The availability of programmes specifically targeted at Malaysians made the prospect of securing funding there feel much more achievable.

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### Technical skills thrive despite AI

CONTRARY to fears that automation will replace hands-on roles, demand for highly skilled technical workers is, in fact, increasing, says Halim Abdullah.

According to the National Technical and Vocational Education and Training (TVET) Council secretariat member, high-growth, high-value fields such as high-tech craftsmanship, digital systems and high-voltage technologies are seeing strong growth, with employers offering competitive salaries for workers equipped with specialised technical expertise.

"In the digital industry, especially with artificial intelligence (AI), skills in TVET are very much needed," he said.

Addressing students uncertain about their future, Halim said choosing skills-based pathways with strong industry demand can help ensure long-term employability.

"Choosing a field with strong employment demand - particularly in areas like electric vehicles, data centres, cybersecurity, semiconductors and AI - can offer both job security and long-term adaptability," he said.



Halim

He also highlighted Malaysia's ambition to increase TVET participation, with targets rising from 55% to 60% and eventually 70% in future policy directions, alongside stronger investment in high-tech sectors.

Halim urged students to prioritise skills and employability over stigma or perceptions surrounding TVET.

"Employers today don't just look at certificates; they want to know what you can do."

"While internet matters, future demand must also guide your decisions in an evolving job market," he said during his "TVET ecosystem briefing in Malaysia" at the Star Education Fair 2026 on April 12.

He added that TVET remains

one of the most resilient pathways for building relevant and adaptable skills in an AI-driven world.

"A key factor behind TVET's resilience lies in its evolving curriculum."

"Training programmes are continuously updated to align with current technological advancements, particularly in AI and digitalisation."

"Industry experts are actively involved in shaping course content, ensuring that students are not learning outdated skills but are instead prepared for real-world demands."

"This close industry collaboration has contributed to strong employability outcomes, with over 95% of TVET graduates securing employment by 2025," he explained.

Beyond technical skills, he said TVET institutions are embedding critical thinking and problem-solving into their training.

"TVET programmes now require students to make decisions, troubleshoot issues, and adapt to changing work environments."

"These competencies are important in an era where workers must complement, rather than compete with, AI systems," he said.

### Megatrends reshaping job demand

THREE major shifts are shaping the job market: energy transition, artificial intelligence (AI) and smart technologies.

These, says Universiti Tenaga Nasional (UNITEN) College of Engineering senior lecturer Dr Kuan Tze Mei, are driving demand for engineers, innovators and problem-solvers who can design and manage future systems.

Citing Malaysia's move towards cleaner and smarter energy systems, she said these include solar power, energy storage systems and smart grids under initiatives such as the National Energy Transition Roadmap.

"Companies are investing heavily in renewable energy, smart grids and sustainable power systems, and these are all career opportunities," she said, adding that the sector is expected to generate growing job demand in the coming years.

Kuan also said that the combination of engineering and AI will be essential in the future, creating roles such as AI engineers, data analysts and smart systems specialists.

On concerns about the threat of AI, she stressed that AI is transforming industries by enhancing efficiency.

"For example, in power engineering, AI is used for predictive maintenance, forecasting when equipment may fail and preventing



Kuan

breakdowns.

"In workplaces such as factories and offices, AI can optimise energy use, adjust temperature based on occupancy, and detect machine faults in real time," she said.

However, she emphasised that AI is not a replacement for humans.

"AI is not there to eliminate engineers; it is there to empower engineers," she said during her talk titled "Powering the Future: Careers in Energy, AI and Smart Technologies" at the Star Education Fair 2026 on April 11.

Pointing to smart technology as the third megatrend, Kuan said it is driven by the Internet of Things, sensors, data systems and high-speed connectivity.

"Smart systems are already being used to manage traffic flow, energy efficiency and public safety."

"Cities such as Kuala Lumpur and Cyberjaya are expected to evolve into smart cities powered

by sensors, real-time data, and advanced connectivity such as 5G and beyond.

"Behind all these systems are engineers and technology experts, and these are future career opportunities," she said.

She added that Malaysia's electric vehicle (EV) ecosystem is no longer niche but is becoming increasingly common due to improved charging infrastructure and consumer confidence.

"Beyond the vehicles themselves, the EV ecosystem includes battery technology, charging infrastructure, power systems, and vehicle-to-grid integration, where energy can be fed back into the grid."

"All of these create new career opportunities in power systems, infrastructure design and battery technology," she said.

Kuan stressed that the future of work will not only demand academic knowledge, but also adaptable, practical and future-ready skills that align with fast-changing global megatrends.

While new technologies are creating new careers, she said success is no longer determined by academic results alone.

"Employers today are looking for problem-solvers who can apply knowledge in real-world situations, not just memorise theories."

"Communication skills are also crucial, as graduates must be able to explain solutions clearly to clients and colleagues."

"Most importantly, adaptability is a key survival skill in a rapidly changing job market."

"If you are not able to adapt, there are many other graduates who can," she concluded.