

JUST about every day, a fresh wave of headlines floods our feeds – climate collapse, digital upheaval, deepening inequality, global health scares.

Once shocking, these crises now pass with a weary nod, woven into the fabric of our daily scroll.

For these very reasons, the demand for solutions that are not only innovative but also sustainable and inclusive has reached a critical threshold.

What is Malaysia's answer to this?

The solution may lie in a sector that has long been present but is often underleveraged: our universities.

Long-regarded as bastions of knowledge, universities are no longer just educational institutions but rather, potential powerhouses of innovation.

This got me wondering: How can universities move to the foreground in the quest for the holy grail of innovation?

As it stands, Malaysia is not lacking a strong network of public and private universities.

But I posit that true empowerment will come from deep collaboration with industries, agencies, and civil society.

Talent is universal, but opportunity is not.

Today, it's no longer about one-sided knowledge transfers, but about building long-term partnerships.

A good example is the University of Arizona's Indigenous Resilience Centre in the United States, which collaborated with Navajo communities who lacked access to clean water and electricity.

So, the university helped convert non-potable water into safe drinking water by installing solar-powered nanofiltration units.

This solution arose from innovative thinking – and directly helped improved lives.

Universities are Malaysia's untapped innovation hubs.

In fact, we don't have to travel all the way to the United States to see the power of such collaboration.

In our own backyard, Multimedia University (MMU) has been actively promoting STEM (science, technology, engineering and mathematics) education and conservation practices.

Through ongoing expansion and community outreach, this longstanding initiative's main goal is to translate research and technical knowledge into actionable programmes that uplift communities, all while enhancing digital readiness.

Equally important, it highlights the importance of supporting and developing STEM talent among those within the university walls.

So, what are some of the projects these young, bright minds have come up with?

What happens when you give 30 secondary school students the tools to build and programme robots from scratch?

You spark a wave of excitement for STEM – and a glimpse into the future of engineering in Malaysia!

That was the essence of MMU's Autonomous Robot Design and Construction for STEM Programme, led by Prof Lim Way Soong, in collaboration with Telekom Research & Development Sdn Bhd's (TM



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■ Even great ideas need a launchpad – that's where academia meets industry

R&D) Robotics & Sensing Technologies Centre of Excellence (CoE).

Lim took these students on a journey of designing and programming functional robots, applying math and science in real-world situations.

We found that 90% of the students expressed newfound enthusiasm for technical subjects, with many indicating interest in exploring careers in engineering, artificial intelligence (AI), or robotics. Some have even gone on to join inter-school robotics competitions.

Everyone talks about the importance of coding these days. But with Nur Liyana Rosli and her team, 30 students – all aged 10 – from the Integrated Islamic School Melaka got hands-on with basic programming using Scratch, a platform designed for young beginners.

This experience certainly boosted their logical thinking and problem-solving skills.

The result? Despite being young and mere beginners, 75% expressed strong interest in further IoT (Internet of Things) learning.

Some may argue that small behavioural changes don't make a big difference.

But 50 enthusiastic participants in MMU's Promoting and Practising Green Habits project set out to challenge that notion.

Spearheaded by the ever-eco-savvy Prof Chong Chin Wei and the CoE for Business Innovation and Communication, this Knowledge Transfer Programme teamed up with Meridian Saito College and Ballotté Dance Studio Sdn Bhd.

The collaboration schooled

participants on the 5Rs: Refuse, Reduce, Reuse, Repurpose, and Recycle – basically, the Avengers of eco-conscious living.

And the results? Let's just say... they're compostable.

Over 80% of participants ditched at least one bad habit within a month. Some now sort recyclables like pros.

One green-thumbed participant is now using used coffee grounds as fertiliser – her plants are caffeinated and thriving.

What started as a simple workshop has blossomed into a full-blown eco-movement.

Today, these green warriors are inspiring their families and neighbours to practice more sustainable habits.

Interestingly, MMU's Faculty of AI and Engineering has embedded a STEM curriculum that empowers students to support local schools with IoT smart farming systems through community outreach.

Assoc Prof Ooi Shuh Yin, director of the Technology Transfer Office at TM R&D, is deeply committed to nurturing young talent and shaping future entrepreneurs and visionary creators.

If we're part of the corporate world, we should ask ourselves: How much we are doing to nurture these new, emerging generations – the ones who might create solutions like a polyfunctional robot that can seamlessly switch between tasks?

Or something as practical as a high-tech pet door using Bluetooth.

Imagine a door that opens when your pet approaches, complete with remote and voice control, curfews, and scheduling features.

Fewer lost pets, I'd say!

Despite Malaysia being in its third wave of STEM education development, we're still behind on our targets to produce 60% science graduates by 2025.

As of 2024, only about 50.83% of upper secondary students in Malaysia are enrolled in STEM streams.

If we look at it from a broader perspective, Malaysia still falls below global standards.

The Programme for International Student Assessment scores have tumbled across Asean – with Malaysia recording the biggest drop compared to Indonesia, Thailand and Vietnam.

This is troubling.

TM R&D, the R&D arm of MMU, has been working hard to reverse this trend by fostering innovation, entrepreneurial thinking, and real-world impact among students.

The genuine hope is to create lasting benefits – for both institutions and the wider community – while doing our part to help Malaysia become a true digital powerhouse.

Innovation is the secret sauce – and we're not shy about turning up the heat. It's what propels nations forward.

But even the best ideas need a launchpad. That's where academia-industry partnerships come in.

Together, we're equipping students with the tools, mindset, and moxie to tackle real-world challenges head-on.

Because when you plant seeds of innovation in young minds today, you grow the leaders, inventors, and game-changers of tomorrow!

Innovation starts young



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