

SEMI HTU aims more STEM talent

The overarching goal with SEMI HTU's programme is to address the global decline in talent shortage in the industry, says its CEO

by NUR HAZIQAH A MALEK

SEMI High-Tech U (SEMI HTU) targets to increase students' participation in the science, technology, engineering, and mathematics (STEM) field, in light of decreasing number of students' studying the science stream.

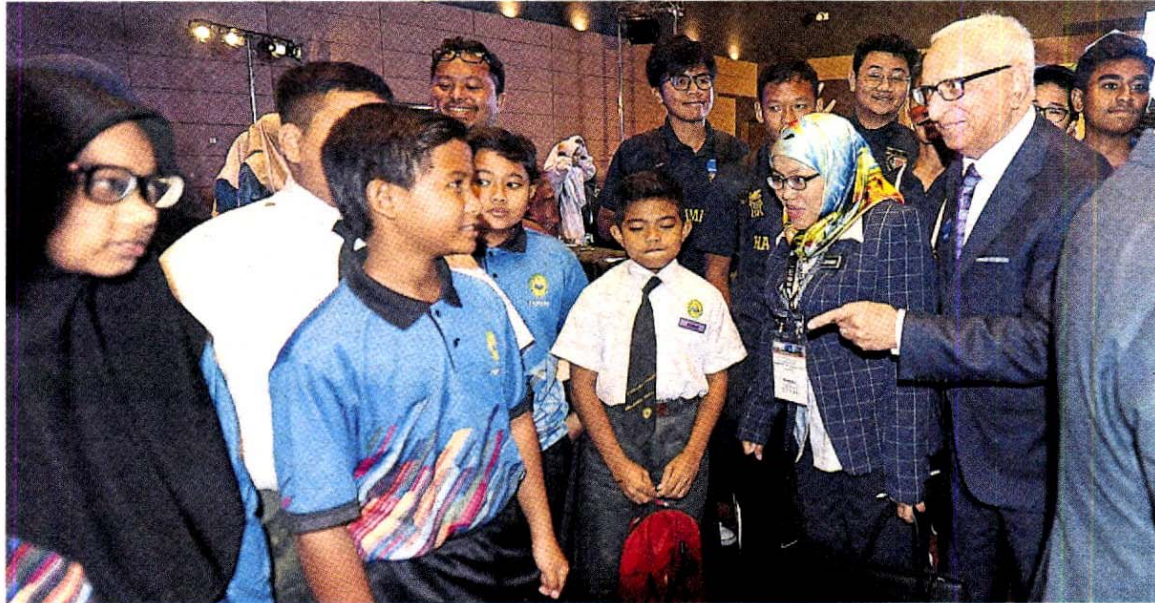
SEMI HTU president and CEO Ajit Manocha said the HTU programme has been its longest-running STEM immersion programme in the US.

"The HTU promotes interdisciplinary and important education principles including inquiry, play, imagination, innovation, critical thinking, problem solving and passion-based learning," he said.

"It was 20 years ago when we realised that the STEM talents are decreasing, and it has been running for 18 years now."

He added that the overarching goal with the programme is to address the global decline in talent shortage in the industry.

"We do this by changing the perceptions about the industry, generating more excitement about career opportunities within the sector and reaching talent that the industry has not tapped yet," he explained.



Pic by Razak Ghazali

(From right) Ajit and Dr Wan Zuhainis talking to school children after the launch of SEMI HTU in conjunction with SEMICON South-East Asia 2019 unveiling its fully-fledged smart factory recently

It has been reported that the number of Form 5 students studying science subjects has dropped an average of 6,000 per year since 2012, and in 2018, enrollment stood at only 167,962, or 44.7% out of 375,794.

Subsequently, STEM graduates have the highest unemployment rate among all other graduates in the country at 20.7%.

The Ministry of Education academic development management director Professor Madya Dr Wan Zuhainis Saad said only 10.7% of the students taking the STPM (Sijil Tinggi Perse-

kolahan Malaysia) took up the science stream in the latest assessment.

"When that happens, there is only so many STEM students that we are receiving for the higher education level, which is why we have to start inculcating curiosity and interest in the sciences at a younger age," she added.

She said in order to do this, teachers also need to be creative to do more homework and explore ways to instil the interest, especially by instilling experiential learning in their lessons.

"Give them examples that they cannot find anywhere else because stu-

dents nowadays know how to use the gadgets, but they do not use these devices for learning," she said.

Dr Wan Zuhainis added that in part of the government's drive to adapt to the shift in the education landscape, there will be a "maker space" for every university in Malaysia.

"Actually, the universities themselves are working on to make sure that there is one 'maker space', and we're hoping to see one for each university. While universities already have their spaces, we want to make it more transdisciplinary," she said.

She added that the concept of the transdisciplinary "maker space" is to encourage students from different disciplines to network and create something together.

"We also aspire for workshops and modules for these spaces, while they can also be used for university students to teach topics they are familiar with school students," she said.

Meanwhile, SEMICON South-East Asia 2019 also unveiled a fully-fledged smart factory, which can be trained and fine-tuned to perform optimally to its user's desires.

SEMICON South-East Asia president Ng Kai Fai said with the rise of smart manufacturing and regions embarking on Industry 4.0, humans are not being replaced by robots.

"We need more human capital. Even though they are prone to mistakes compared to robots, there are parts in the STEM industry that need them to handle, which is the 'back-end,'" he said.

The smart factory displayed was an end-to-end microelectronics supply chain, whereby each component in the multi-step line is displayed virtually or with actual equipment, beginning from design and materials through front-end patterning, packaging, and test to final board and assembly.

In semiconductor manufacturing, there are two processes whereby the semiconductor would be completed, through the front-end process, which is the wafer processing operation and the back-end process, which is the assembly process.