

PUTRAJAYA -- A restaurant in South India went viral recently for replacing its waiters with robots. The transition to more advanced technology through the Fourth Industrial Revolution, better known globally as Industry Revolution 4.0 (Industry 4.0), will cause robots to replace humans in performing basic human tasks related to daily life and job routines. Aside from robots, other

this new revolution so that Malaysia can move alongside other countries that are leaders of Industry 4.0. As Malaysia's premier Technical and Vocational Education and Training (TVET) institution, Politeknik Malaysia plays significant role in TVET education. By revamping several of its curriculum to meet the needs of Industry 4.0, the polytechnic that is under the Higher Education Ministry

said the Deputy Director-General, Polytechnic Education Department, Dr Mohammad Naim Yaakub. Some industry players are still at the Industry 2.0 phase while those at Industry 3.0 are in the process of transitioning into Industry 4.0. This is because not all are prepared to invest in machines and system training and upgrades as well as staff training.



POLYTECHNIC MEETS NEEDS OF INDUSTRY 4.0

BY KURNIAWATI KAMARUDIN

new technology such as automation, the Internet of Things(IoT), big data analytics, simulations, system integration and cloud computing are set to shape the landscape of the modern world. These advances will result in a lifestyle that is less dependent on human labour. Education is the most important foundation in facing the challenges of

is looking at producing graduates who can become catalysts for new technology.

PREPARING TO MEET INDUSTRY 4.0

As with other major changes, the Revolution Industry 4.0 would not be taking place overnight. Instead, it would change phase by phase,

"There are innovators and early adopters who quickly made the first move while others are still figuring out how to best move forward. "Whatever their challenges are, the industry has no choice but to make the necessary changes to remain relevant and survive the era of Industry 4.0," he said. Mohammad Naim said that the Polytechnic Education Department



had held many programmes to support the transition such as the roundtable conference TVET 2017 – Polytechnics and Community Colleges to discuss the direction of polytechnics and community colleges towards the empowerment of TVET, in line with the recent boom of the industry revolution.

Six resolutions were formed, among them the Polytechnic and Community College Strategic Plan 2018-2025, aimed at producing students from a balanced and holistic education system. He said that it would also involve a reform of the scope of the curriculum as well as teaching and learning methods. “Aside from that, we can also use new approaches

in examinations and assessments, aside from strengthening our smart partnership concepts and improving the efficiency of our administration,” he said.

CHANGING THE CURRICULUM

The Polytechnic’s early analysis will assess the readiness of programmes offered and whether the graduates produced will meet the needs of Industry 4.0. Mohammad Naim said there were nine skills and nine new technology highly needed for the purpose. The nine skills are digital literacy, judgement and decision-making, project management, creative and analytical thinking, complex problem-solving, entrepreneurship and technopreneurship, high and

global-level thinking and lifelong learning. “Eight of the nine skills were introduced to students through the curriculum as early as 2004. Digital literacy methods, for example, are in all engineering programmes and only need to be expanded to non-technical fields like business and hospitality,” he said.

The nine new technology highlighted under Industry 4.0, meanwhile, are autonomous machine, digital simulation, virtual reality, system integration, IoT, cyber security, cloud computing, big data analytics and 3D printing.

Mohammad Naim said the basic knowledge of these technology have been taught through the engineering and IT curriculum at the Polytechnic. “Analytical findings show that nearly all engineering programmes at the Polytechnic are capable of implementing the transition to Industry 4.0 and ensuring that TVET graduates are of quality,” he said.

--BERNAMA