

INNOVATION IN EDUCATION

Academic R&D gets the time and day in the new economic model

Many of Malaysia's leading universities are working to combine higher education with higher earnings, seeking to turn the results of research and development (R&D) into start-ups, commercialised products and profit.

However, while some of the country's leading tertiary institutions are looking to more tangible dividends from their research programmes, they are also working to contribute to the nation's social and economic development.

While one of the core functions of the Universiti Kebangsaan Malaysia (UKM), along with research and teaching and learning, are services and industrial linkages, this is not just about making money but to contributing to a sustainable society, says vice chancellor Dr Sharifah Hapsah Syed Hasan Shahabudin.

Part of this contribution will come through overhauling the university's teaching activities to make graduates commercialisation centric, she told OBG.

"Undergraduate curriculums will be revamped, information technology and sciences will include a component of business, so from the beginning students think about how to turn technology into money. They will learn how to manage innovation, technology, services, not doing an MBA per se, but having knowledge on bringing technology to market," she says.

The university has also set up a company - Technology Transfer - as a vehicle to turn research into products and businesses and has established a Centre for Collaborative Innovation together with the Stevens Institute of Technology of the US with the objective of enhancing human capital development and creating innovations for wealth generation.

Cultivating Entrepreneurial Innovation

Another that is forging direct ties between business and education is the University of Malaya, though according to Ghauth Jasmon, the university's vice chancellor, there is the need to grow an academic entrepreneurial culture in order for Malaysia to take full advantage of undoubted skills that exist.

"The main challenge is Malaysian academics themselves; the culture is not there, they are pure academics and are content with research and teaching, they must be encouraged to be enterprising," he says in an interview with OBG.

While the culture may still be lagging somewhat, UM is moving forward, working with a Singaporean company to

market and commercialise patents resulting from some of the university's research. In addition, UM has set up a Centre of Innovation & Commercialisation (UMCIC), which facilitates the university's inventors and academicians to actualise their ideas, concepts and research products for viable commercialisation.

The need to build this culture is a lesson that has been learned by the government, which is making a concerted push to turn research and innovation into driving forces of the economy and indeed every day life. The government of Prime Minister Datuk Seri Najib Tun Razak is in the process of putting in place a series of reforms aimed at developing a high value, high income and high skill economy that can compete on the world stage.

Launching the Innovative Malaysia 2010 campaign, a programme aimed at supporting efforts creativity across the community, Najib says that in order to be at the forefront of the race to achieve a new economic model based on knowledge and innovation Malaysia needed intellectual input as well as sophisticated and latest technology.

"Evidence clearly shows that the key to success for the developed countries are innovation and creativity," he says on January 27. "An ecosystem that enables society to create ideas and think in an innovative and creative manner is crucial to the formation of a society that promotes innovative culture."

The government initiative is timely, according to Professor Datuk Dr Mohamed Shariif Mohamed Din, director of Universiti Putra Malaysia's (UPM) Innovation and Commercialisation Centre, who says it would produce more inventors, especially among the younger generation, and help Malaysia achieve its goal of becoming a developed nation by 2020.

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"If we do not change now, our country will be left behind in various aspects," he says in an interview with the Bernama news agency on January 27. "Look at the developed nations like Japan, Korea, the United States and the European countries. They progressed because of innovation. If we are not innovative, we will be left behind."

Generating Funds

While the government is committed to maintaining support for higher education, increasing demands for funds could mean a smaller slice of the budgetary pie for Malaysia's private universities, a fact acknowledged by Dr Mashkuri Yaacob, the vice chancellor of Universiti Tenaga Nasional.

"R&D has to play a bigger role as government funds will not continue forever, this needs to become a separate revenue generator," he tells OBG in a recent interview.

To power that generator, the university is focusing on renewable energy, having just established Unitem R&D, a company to commercialise its research work, particularly in areas such as wind, solar and biodiesel.

"The purpose is to be a solutions provider to the industry, so we established a new institute - the Energy Policy and

Research Institute - to focus on renewable energy," he says. "Malaysia wants to reduce by 40% its carbon emissions and needs a lot of effort to meet industry needs. This is changing the role of educational institutions."

Industry-driven R&D will thus become a growing preoccupation for private universities as well as developing into a source of revenue in the long term.

"University research through push factors should not be the major direction of research by private universities; we want the pull factor, to work with the government, universities, industry and commerce," explains Peter Ng Tong Se, the president of UCSI Education Group.

He adds that: "As a revenue source, this is becoming a new potential area. The research must have a commercial objective for it to be sustainable. Research developed by private universities should really be about value enhancement, meaning more value and less cost, rather than the traditional high-value and high-cost approach. There is no trade-off here, that is the misconception."

Though the role of universities in Malaysia may be changing, many appear to have already embraced the need for R&D. 