

PERSPECTIVE

Malaysian Research Universities, the way forward

As we enter 2018 and ponder the future, it is perhaps worth reflecting on one milestone in Malaysian higher education that may have gone rather unnoticed.

The past year, 2017, marked a decade of the Malaysian Research Universities (MRU) programme. Despite formalisation of such a status for five Malaysian universities as recently as only 10 years ago, the research university is not a new concept. The five universities under the MRU umbrella are University of Malaya, Universiti Sains Malaysia, Universiti Putra Malaysia, Universiti Kebangsaan Malaysia and Universiti Teknologi Malaysia.

As the name suggests, a research university is one with its academic staff continuously engaged in research. This concept is central to the operations of such universities and should in theory, pervade through to every level of operations. For example, even undergraduate teaching in a research university will have research elements incorporated where students will be exposed to not just materials from textbooks, but also the latest research findings by a faculty member teaching a particular course. Funding is also intensively solicited and routed for research purposes.

Some of the earliest documented ethos of the modern research university can be traced back to the works of the 19th century philosopher Wilhelm von Humboldt. He offered three guiding principles: the university exists for the sake of knowledge; academic freedom of the university must be guarded from external influences; and the nature of scholarly enquiry (research) is inexhaustible. Von Humboldt also wrote of a delicate balance that needed to be maintained between the state and the university.

In order for the first two principles to be upheld, the university needed to be guaranteed by the state. Only governments would have the capacity, and should have the will, to guarantee the endless pursuit of knowledge.

However, in order for the state to gain any useful knowledge from the university, it needed to leave the scholars alone. The ultimate aim, according to Humboldt, is that the university should be of use to the state and the broader public, but never immediately so. The scholarly pursuit of knowledge required time and space that may one day be of use beyond the university.

The history of formal tertiary education in Malaysia can be traced back to the University of Malaya's origins as the King Edward VII College of Medicine. If research universities are not a new concept, why have our universities not been research universities all this while? It is not that Malaysian universities have not been involved in research. In fact, many universities without such a label do carry out research. The difference is perhaps the culture when it comes to carrying out research. The MRU programme was intended to provide a boost that could better inculcate such a culture in the universities under it.

This research culture concept may be alien to many outside of academia. In practice, what it means for academic staff is that their job scope is centred on conducting research. This convention is also extended to the students and other staff. The university, in this regard, lives and breathes research. But what does it mean to do so? In my opinion, this research culture needs to be distin-



MOHD
FIRDAUS
RAIH

“As we enter the years of the Fourth Industrial Revolution, is using what are essentially 20th century-based methods of quality assessment the right direction to progress?”



Siti Munira Abdul Razak (right) and Mafuza Samsudin at work in the Laboratori Perkhidmatan Halal, Universiti Putra Malaysia, Serdang.

guished from purely quantitative means of performance measurement.

Several mentors I have had the privilege of knowing perhaps embody the spirit of living and breathing research. In a way, to do so means to (almost) never switch off — one's research is always in mind. This drive is borne out of a curiosity to explore and discover knowledge, not because of the need to satisfy job performance requirements.

In this way, the research becomes a way of life, but not a burden or source of distress. I found it amusing that, of the mentors I mentioned, all seemed to state directly or imply that they are not really employed to work, but are paid to pursue a passion (a few even used the word hobby).

Have the MRUs been able to inculcate this culture of living and breathing research? One would have to be embedded in, making qualitative fly-on-the-wall type observations in order to perhaps most accurately gauge and conclude such an outcome. We rely on numbers (and rankings) to measure such progress or success. Unfortunately, perhaps we rely on such numbers too much. I agree there is nothing wrong with looking at the data, except when we rely solely on such quantitative methodologies.

However, if we were indeed to rely solely on numbers, then the MRU programme has been a success. Statistics for academic publications by MRUs spiked and have remained on a steady increment. In a five-year period from 2003-2007, the number of papers published per year increased from 1,310 papers in 2003 to 3,160 papers in 2007 (a difference of 1,850).

The next five-year period after the MRU programme was initiated saw an increase from 5,036 papers recorded in 2008 to 13,695 papers published in 2012 (a difference of 8,659 papers). Although, publications are not the only way to measure such progress, it is perhaps the simplest way because publishing research findings remains a core business of the research enterprise.

One might question the impact these writings have for the nation. After all, the most visible and tangible products of universities the world over are undoubtedly their graduates, not papers. A potential student and parent will more likely ask what job prospects await an alumni of a particular university rather than ask how many academic research articles the university has published. Several different metrics have been used in attempts to quantify the impact of collective knowledge such as published research articles.

However, I don't believe they quite truly reflect how the knowledge is applied in reality. The measures in place mainly use different methods

to quantify the number of times a paper is mentioned by other papers. Such methods clearly do not reveal what real-world applications the research outcomes were. This is perhaps where universities must change. They should strive for certain ideals but refrain from being idealistic and aloof. I believe publications are necessary for the sake of compiling and documenting knowledge. Publications are important and should remain a means of assessing research outcomes. However, merely quantifying the number of papers and the times they are cited is surely not the way forward. This practice must be revised. Perhaps a more pragmatic approach can better deal with the rapidly changing environment that universities now operate in.

The MRUs can be an ideal platform to lead the way. As our universities mature, the time has come to become less independent if not yet to totally break away from what are essentially Western tools of assessments. Many of these tools have also been acknowledged by Western academics to be flawed. These tools were in a way designed to be more advantageous to select institutions. But yet they continue to be used and we continue to make decisions based on their results.

Until more recently, universities were expected to serve its constituents — the state or stakeholders and its citizens. They do so by being an institutional source of knowledge that are collected and disseminated. Unfortunately, universities the world over are now more subservient to box-ticking and filling in numbers to “play” the rankings tables. As we enter the years of the Fourth Industrial Revolution — an era of big data and artificial intelligence — is using what are essentially 20th century-based methods of quality assessment the right direction to progress?

The MRU programme has brought an awareness of research culture into Malaysian universities and research institutions. In many ways, the Higher Education Ministry can count the MRU programme as a feather in its cap — a success in pushing the boundaries of our capacity to be more globally competitive. We are not there yet. But progress has been made. Perhaps the platform can also be the catalyst to pioneer a revolution in the assessment of higher education quality. Nothing is stopping us from leading in this direction instead of merely following a crowd driven by conflict of interest and questionable intent.

The writer is a bioinformatician and molecular biologist with the Faculty of Science and Technology and a Senior Research Fellow at the Institute of Systems Biology, Universiti Kebangsaan Malaysia. Email him at firdaus@mfrlab.org